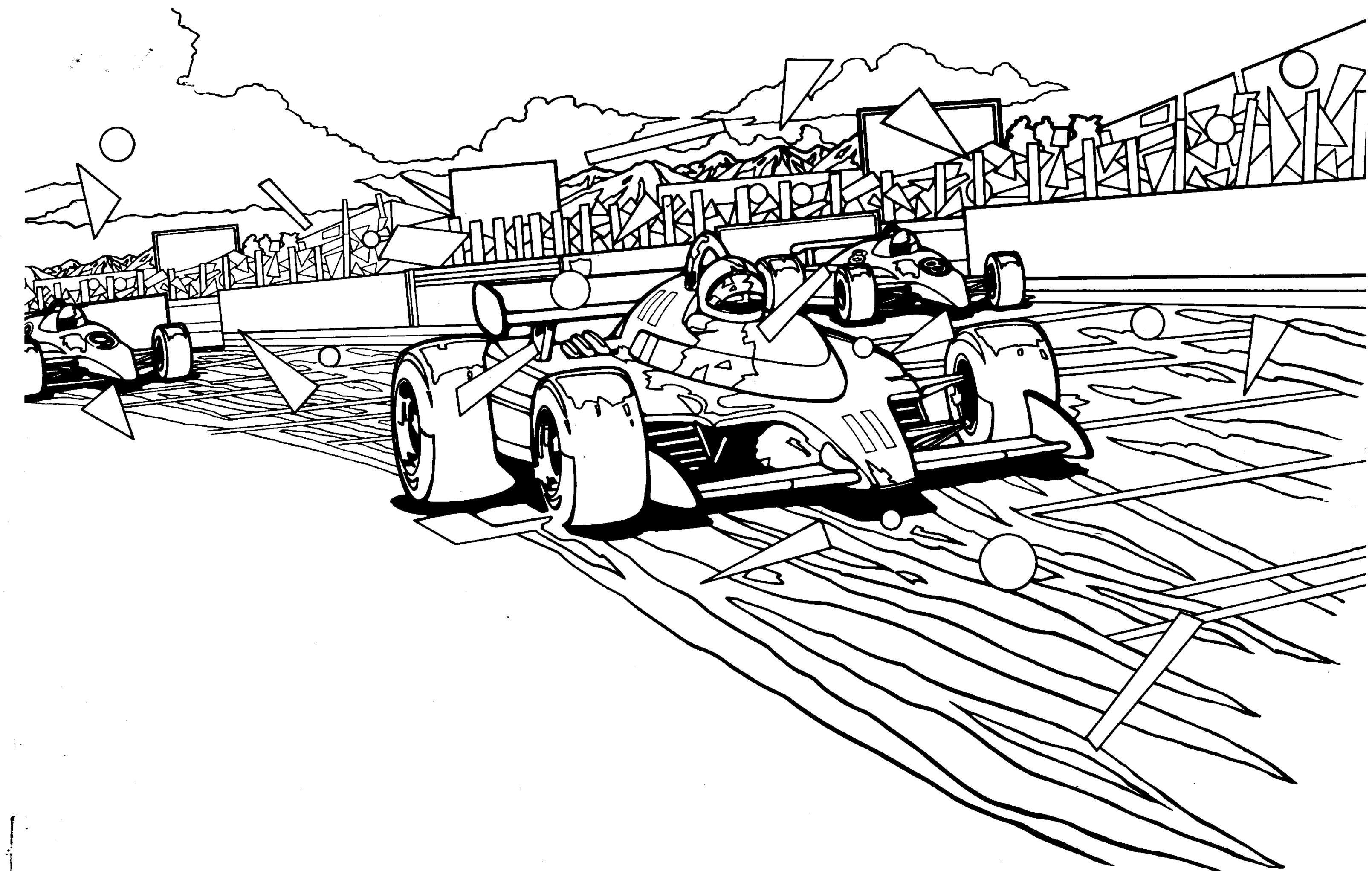
Table of Contents

NOTE

This staple temporarily holds the schematic package together. Remove the staple before using these schematics.



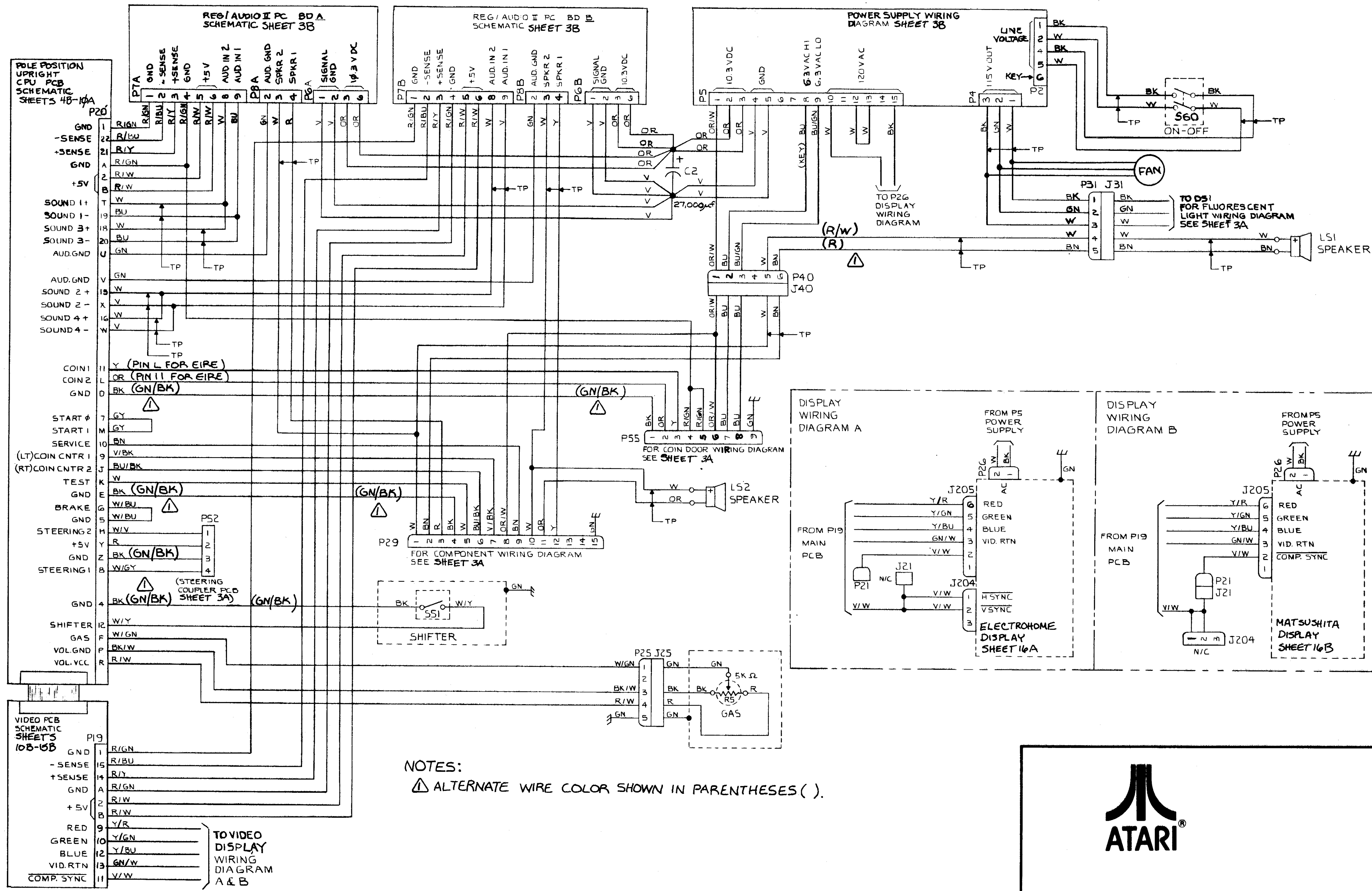
Schematic Package Supplement to

POLE POSITION™*

Operation, Maintenance, and Service Manual

*Pole Position is engineered and designed by Namco Ltd. Manufactured under license by Atari, Inc.

2M



NOTES:

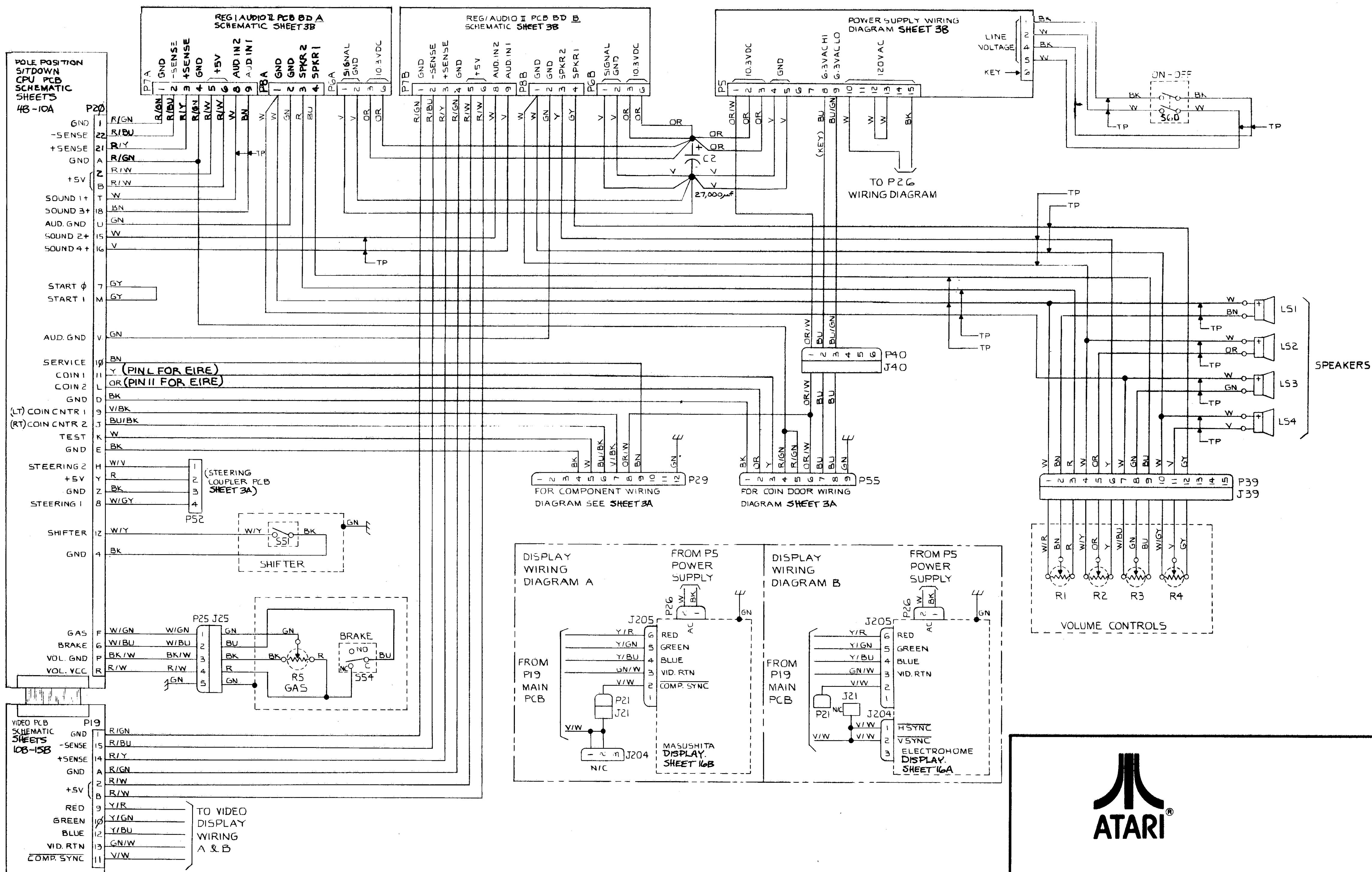
⚠ ALTERNATE WIRE COLOR SHOWN IN PARENTHESES ( ).

ATARI®

Pole Position Upright Main Wiring Diagram

SP-218 Sheet 1B

8th printing

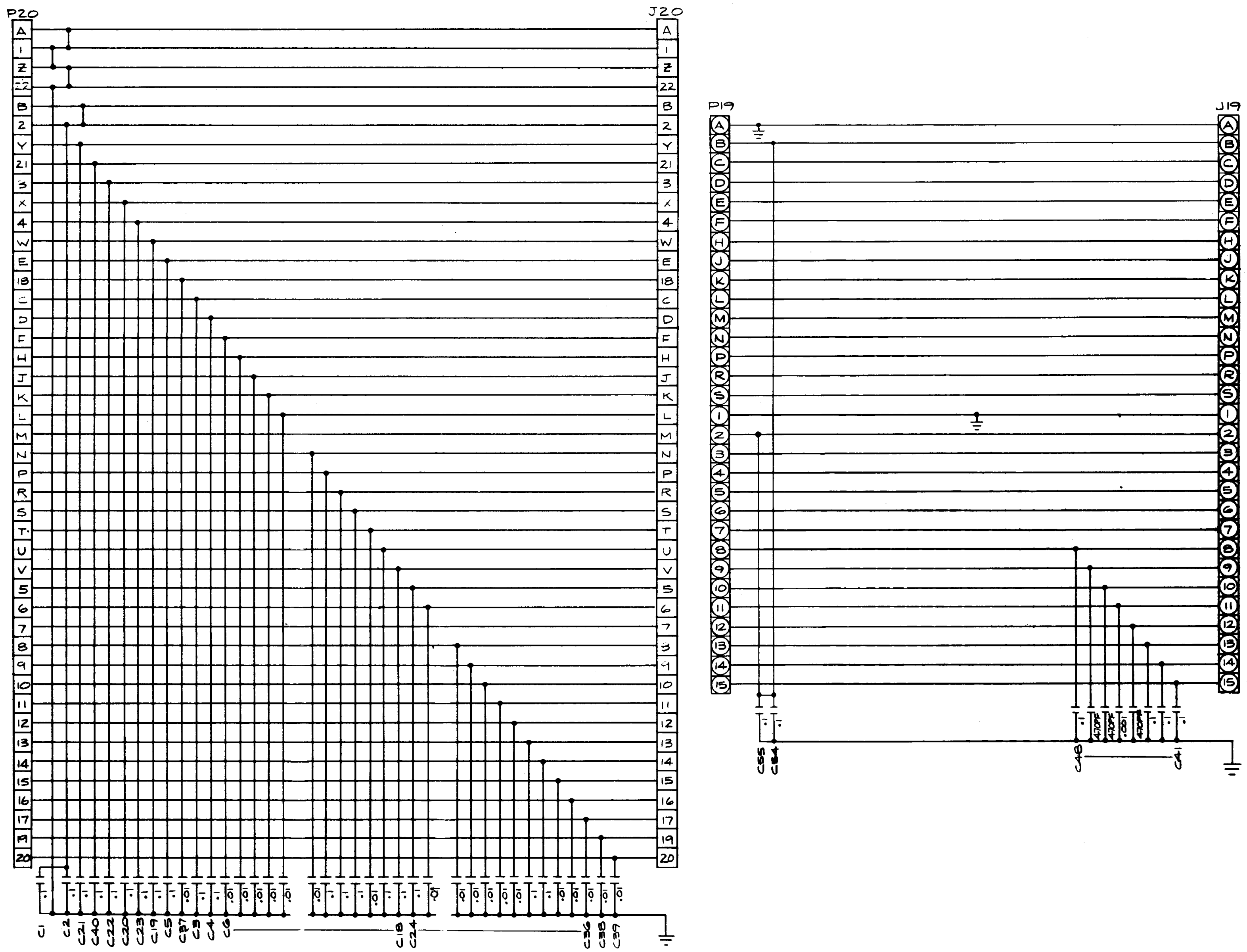


ATARI®

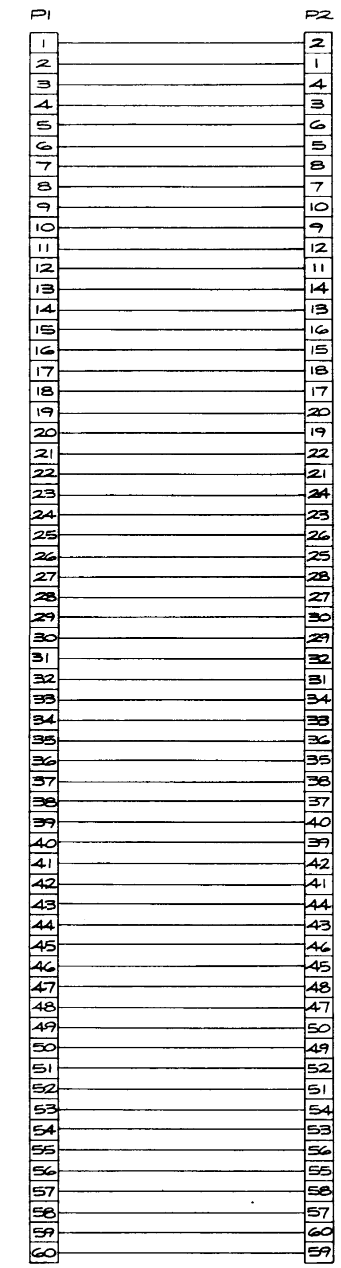
Pole Position Sit-Down Main Wiring Diagram

SP-218 Sheet 2A
8th printing

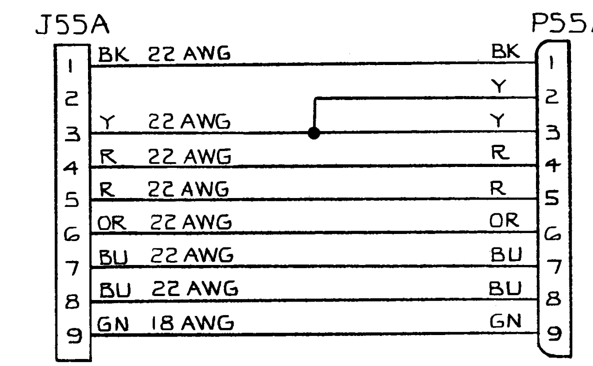
EMI Shield PCB Wiring Diagram



EMI End PCB Wiring Diagram



Coin Option Interconnect Wiring Diagram



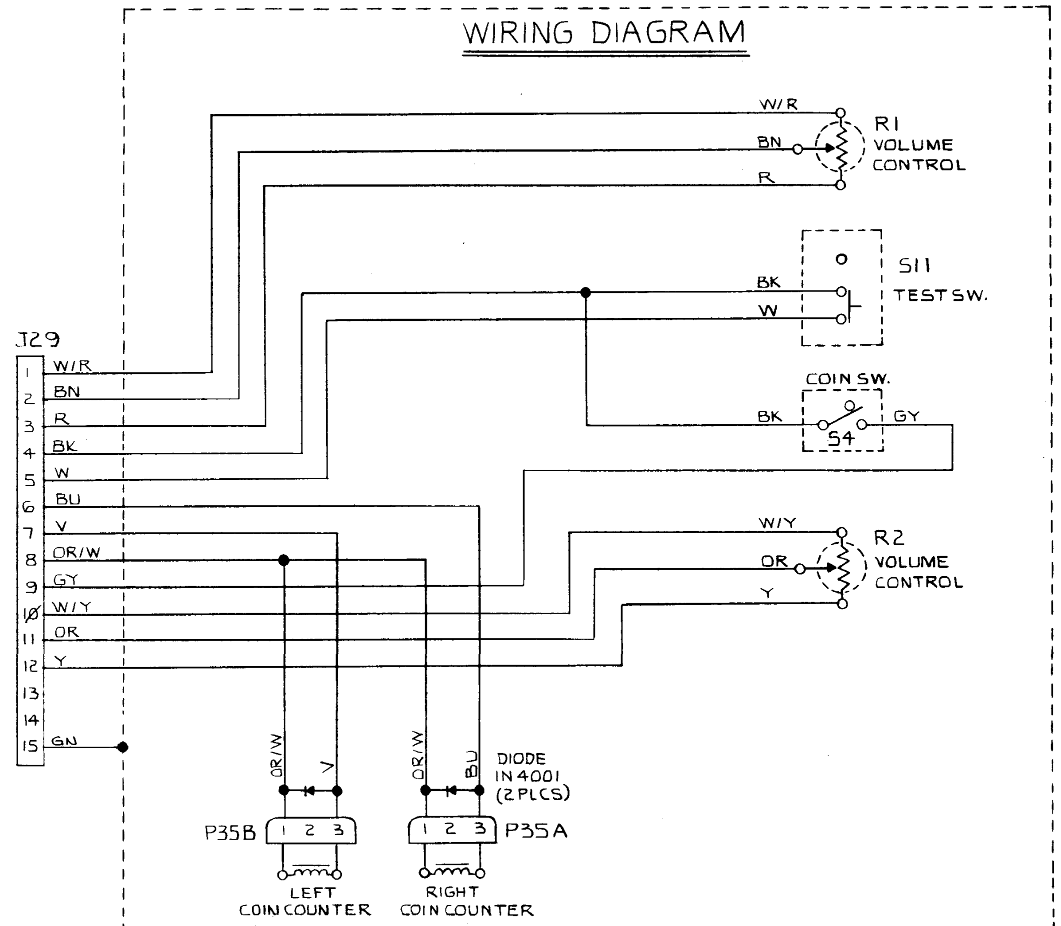
ATARI®

Pole Position Game Wiring Interfaces

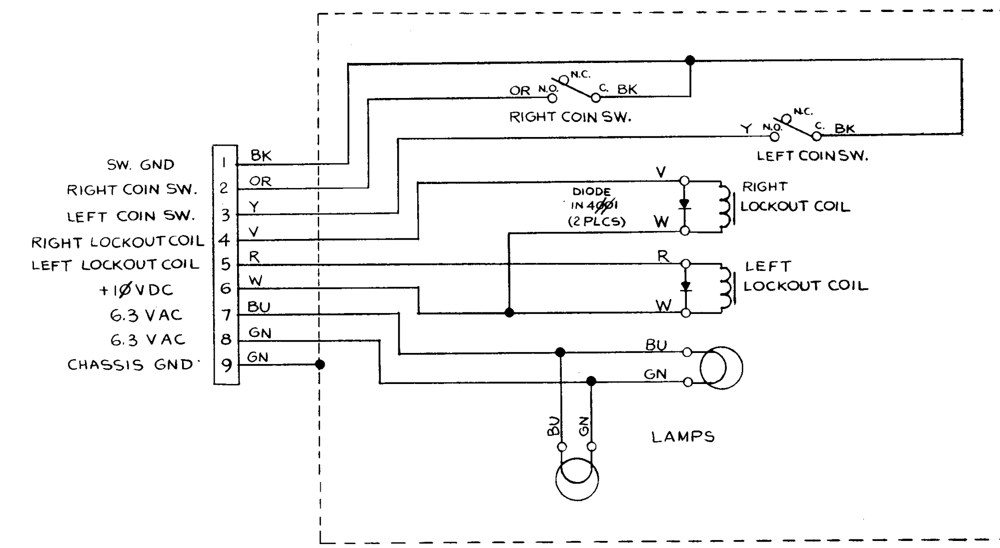
A Warner Communications Company

SP-218 Sheet 2B
8th printing

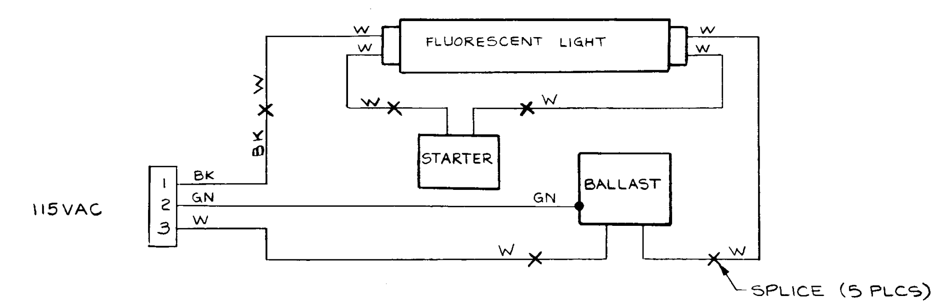
Upright Utility-Panel Wiring Diagram



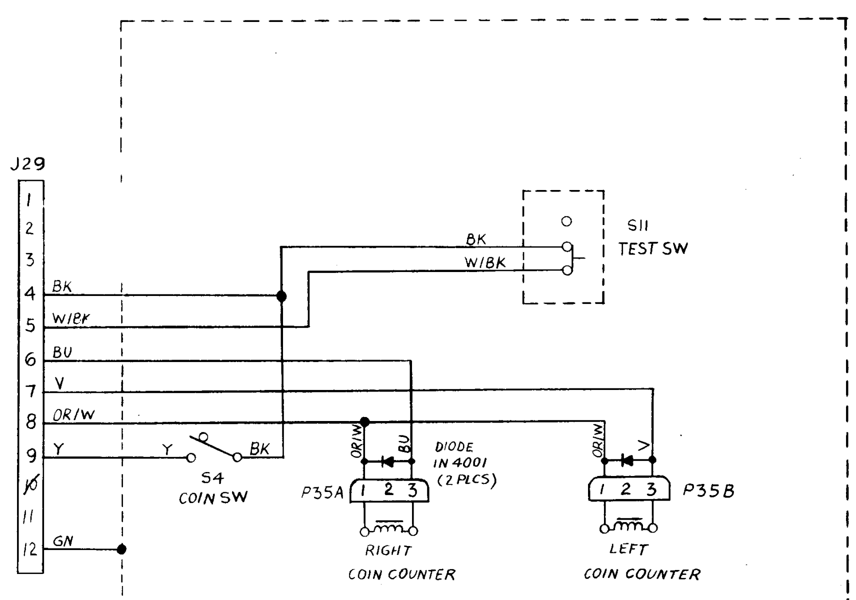
Coin-Door Wiring Diagram



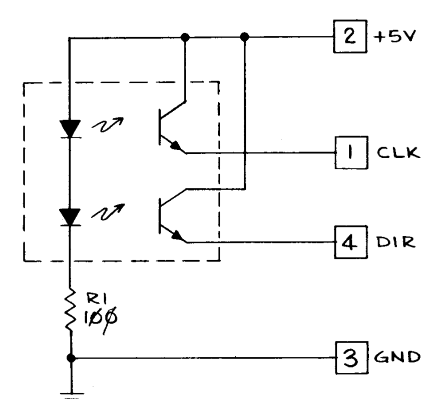
Upright-Only Fluorescent Light Wiring Diagram



Sit-Down Utility-Panel Wiring Diagram



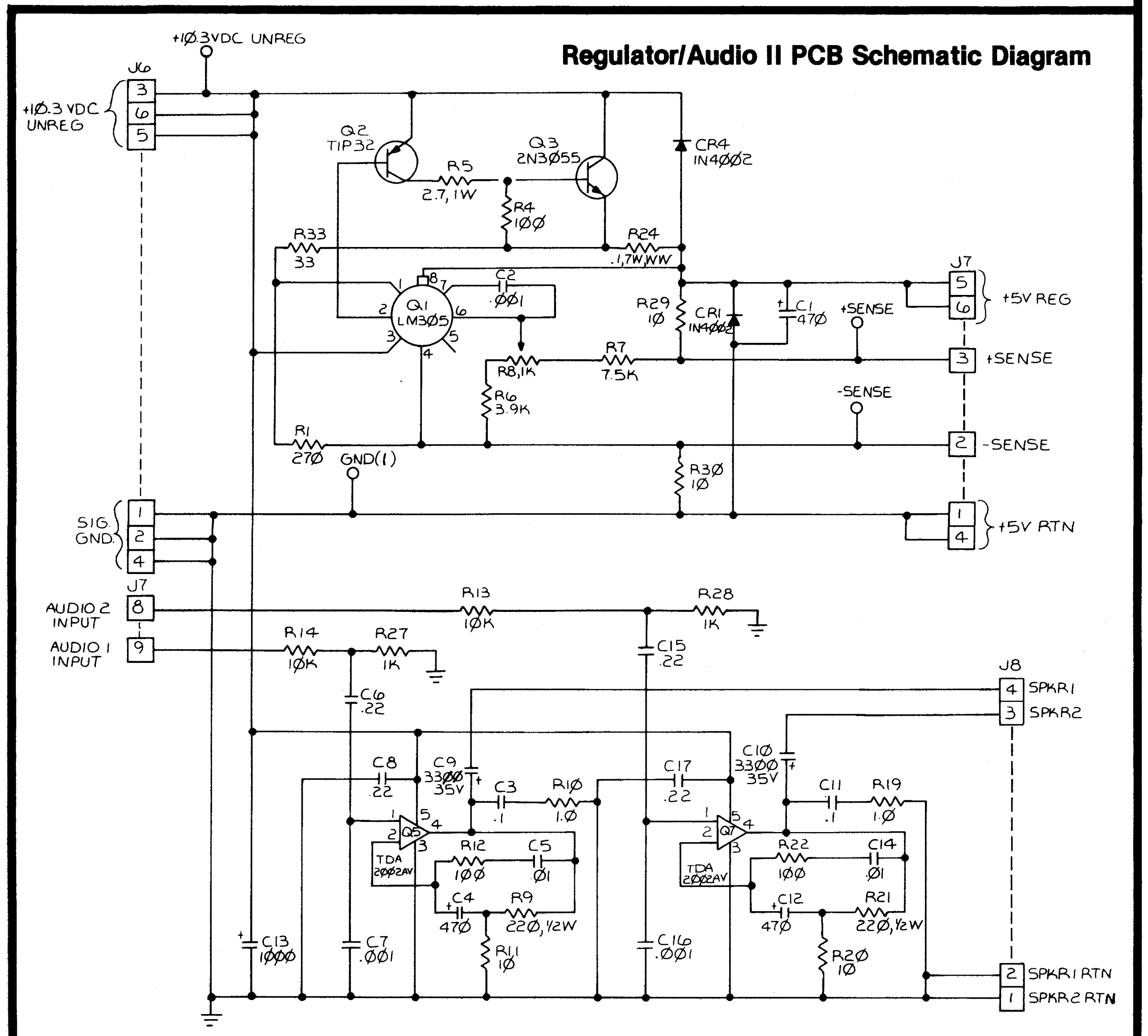
Steering Coupler PCB Schematic



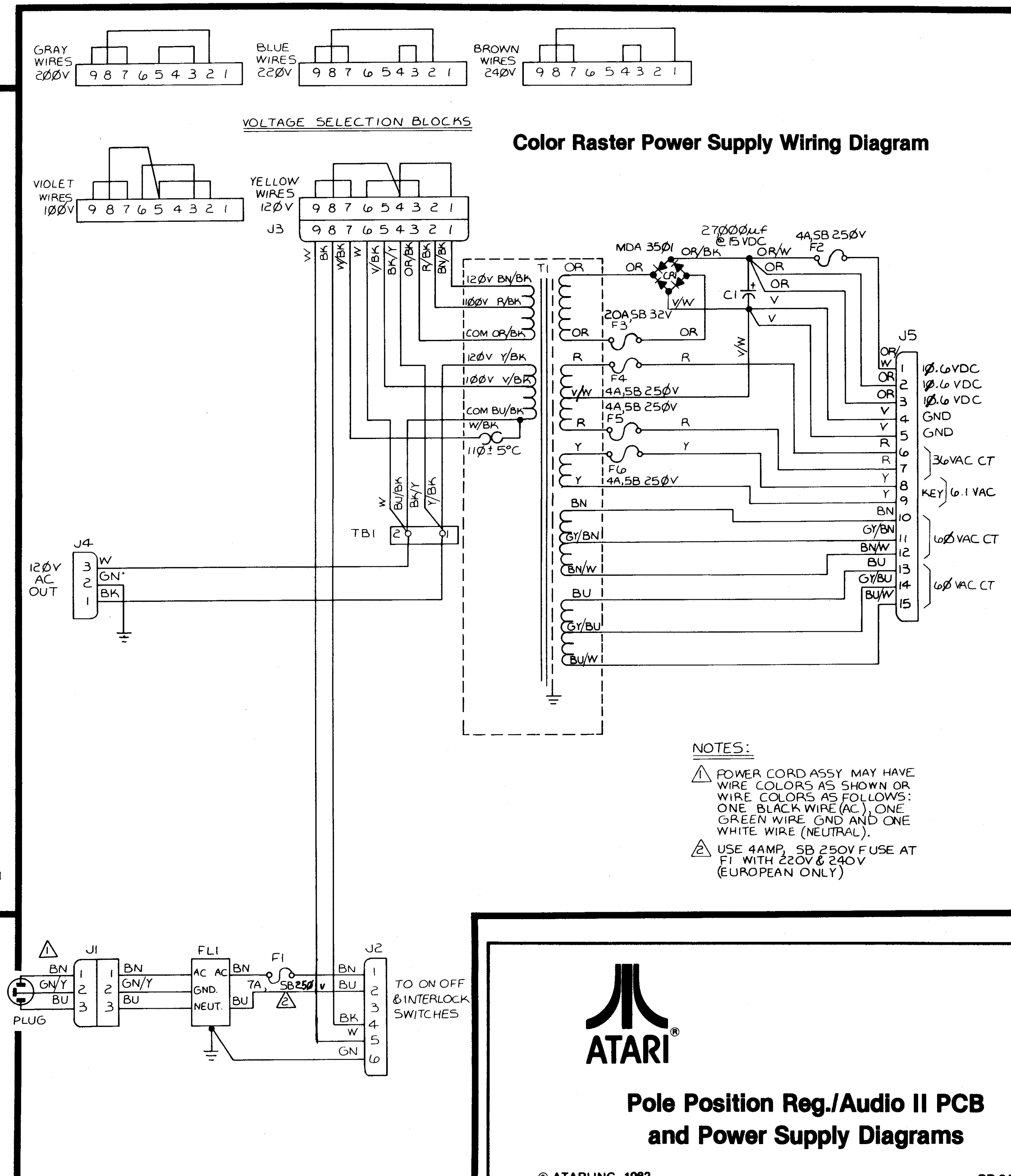
Pole Position Game Wiring Interfaces

SP-218 Sheet 3A
8th printing

Regulator/Audio II PCB Schematic Diagram



Color Raster Power Supply Wiring Diagram



ATARI®

Pole Position Reg./Audio II PCB and Power Supply Diagrams

SP-218 Sheet 3B

A Warner Communications Company

8th printing

MEMORY MAP

CPU 1 AND 2

HEXADECIMAL ADDRESS	READ/ WRITE	FUNCTION
0000-37FFF	R	Program Memory
4000-7FFF	R	Program Memory
8000-8FFF	R/W	Motion Object Memory
(8700-87FF)		Vertical and Horizontal Position
(8F00-8FFF)		Character, Color, Vertical Size, Horizontal Size
9000-97FF	R/W	Road Memory
(9000-93FF)		Character
(9700-97FF		Horizontal Scroll
9800-9FFF	R/W	Alphanumeric Memory
A000-AFFF)	R/W	View Character Memory
C000	W	View Horizontal Position
C100	W	Road Vertical Position

CPU 3

HEXADECIMAL ADDRESS	READ/ WRITE	FUNCTION
0000-1FFF	R	Program Memory
2000-2FFF	R	Program Memory
3000-37FF	R/W	Battery Back-Up RAM
4000-43FF	R/W	Motion Object Memory
(4380-43FF)		Vertical and Horizontal Position
4400-47FF	R/W	Motion Object Memory
(4780-47FF)		Character, Color, Vertical Size, Horizontal Size
4800-48FF	R/W	Road Memory
(4800-49FF)		Character
(4B80-4BFF		Horizontal Scroll
4C00-57FF	R/W	Alphanumeric Memory
(4C00-4FFF)		Alphanumeric
(5000-53FF)		View Character
8000-83FF	R/W	Sound Memory
(83C0-83FF)		Sound
9000	R/W	4-Bit CPU Controller
A000	R/W	Input/Output
A000	W	IRQ Enable (1 = enable, 0 = disable)
	R	Bit 0: Not Used
		Bit 1: 128 V
		Bit 2: Power-Line Sense
		Bit 3: ADC End Flag
A001	W	4-Bit CPU Enable
A002	W	Sound Enable
A003	W	ADC Input Select
A004	W	CPU 1 Enable
A005	W	CPU 2 Enable
A006	W	Start Switch
S007	W	Color Enable
A100	W	Watchdog Reset
A200	W	Car Sound (Lower Nybble)
A300	W	Car Sound (Upper Nybble)

Schematic Reference Designators and Symbols

Logic symbols depict the logic function performed by that particular device and may differ from the manufacturer's data.

REFERENCE DESIGNATORS:

C	Capacitor
CR	Diode, signal or rectifier
F	Fuse
J	Connector
L	Inductor, fixed or variable
LS	Speaker
P	Connector
Q	Transistor or silicon-controlled rectifier
R	Resistor, fixed or variable
S	Switch
T	Transformer
TP	Twisted wire pair
VR	Voltage regulator
Y	Crystal

WIRE COLORS:

R	Red
GN	Green
Y	Yellow
W	White
BU	Blue
BN	Brown
BK	Black
OR	Orange
V	Violet
GY	Gray

Electrical components shown on the schematic diagrams are in the following units unless otherwise noted:

Capacitors = microfarads (μf)
Resistors = ohms (Ω)
Inductors = microhenrys (μh)

SYMBOLS:

⏚ Ground

Test Point

☐ PCB edge connector pad

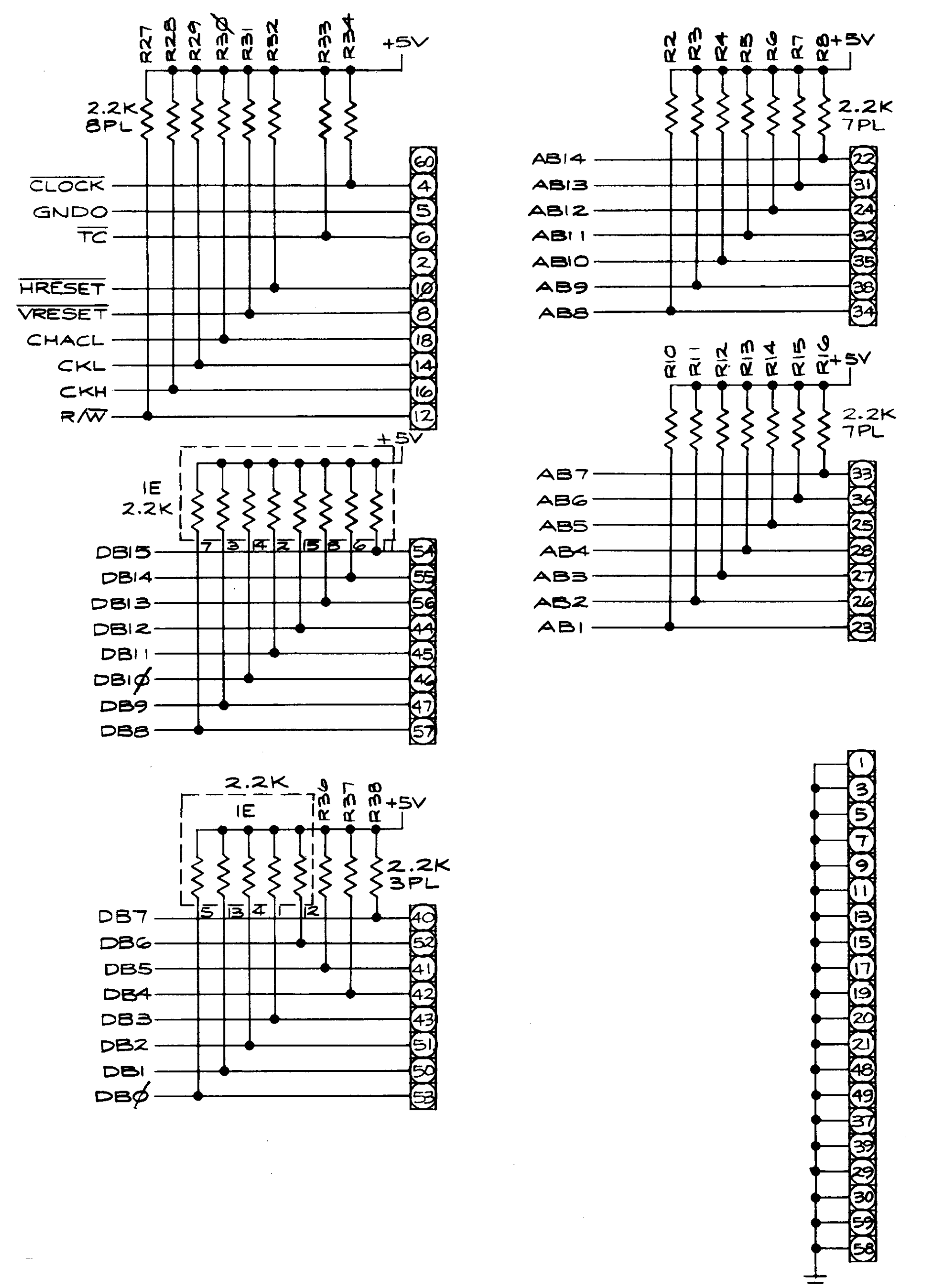
ATARI®

Pole Position Memory Map and Schematic Notes

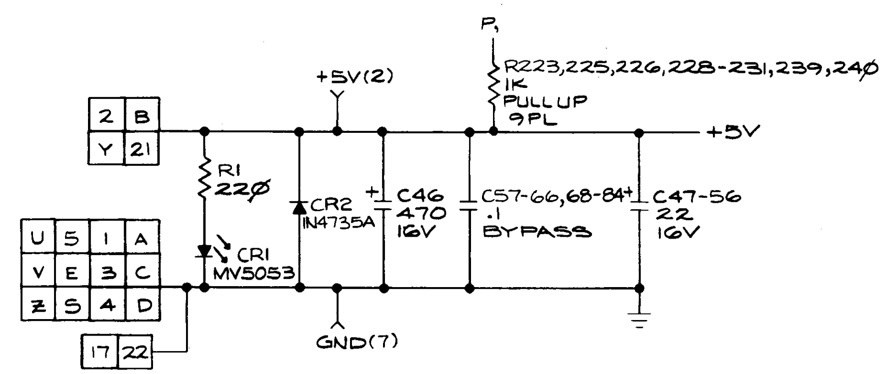
A Warner Communications Company

SP-218 Sheet 4A
8th printing

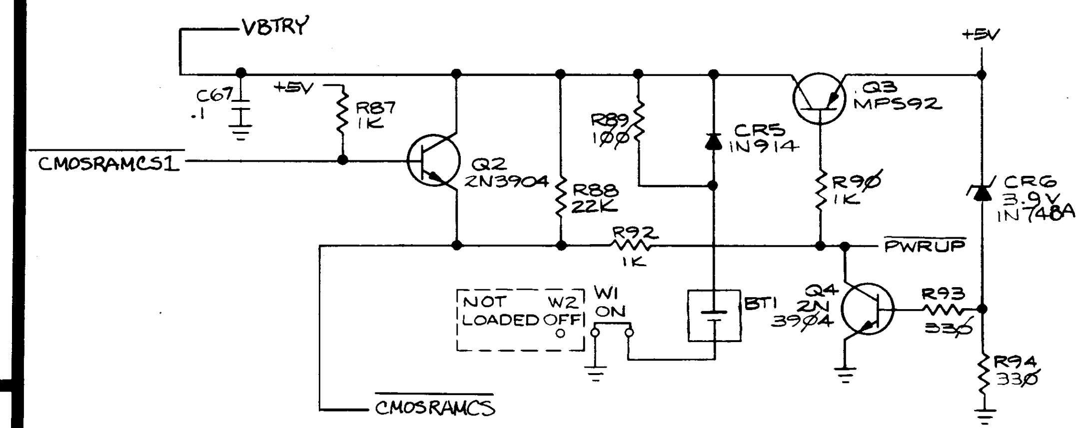
CPU PCB Edge Connector



CPU PCB Power Input



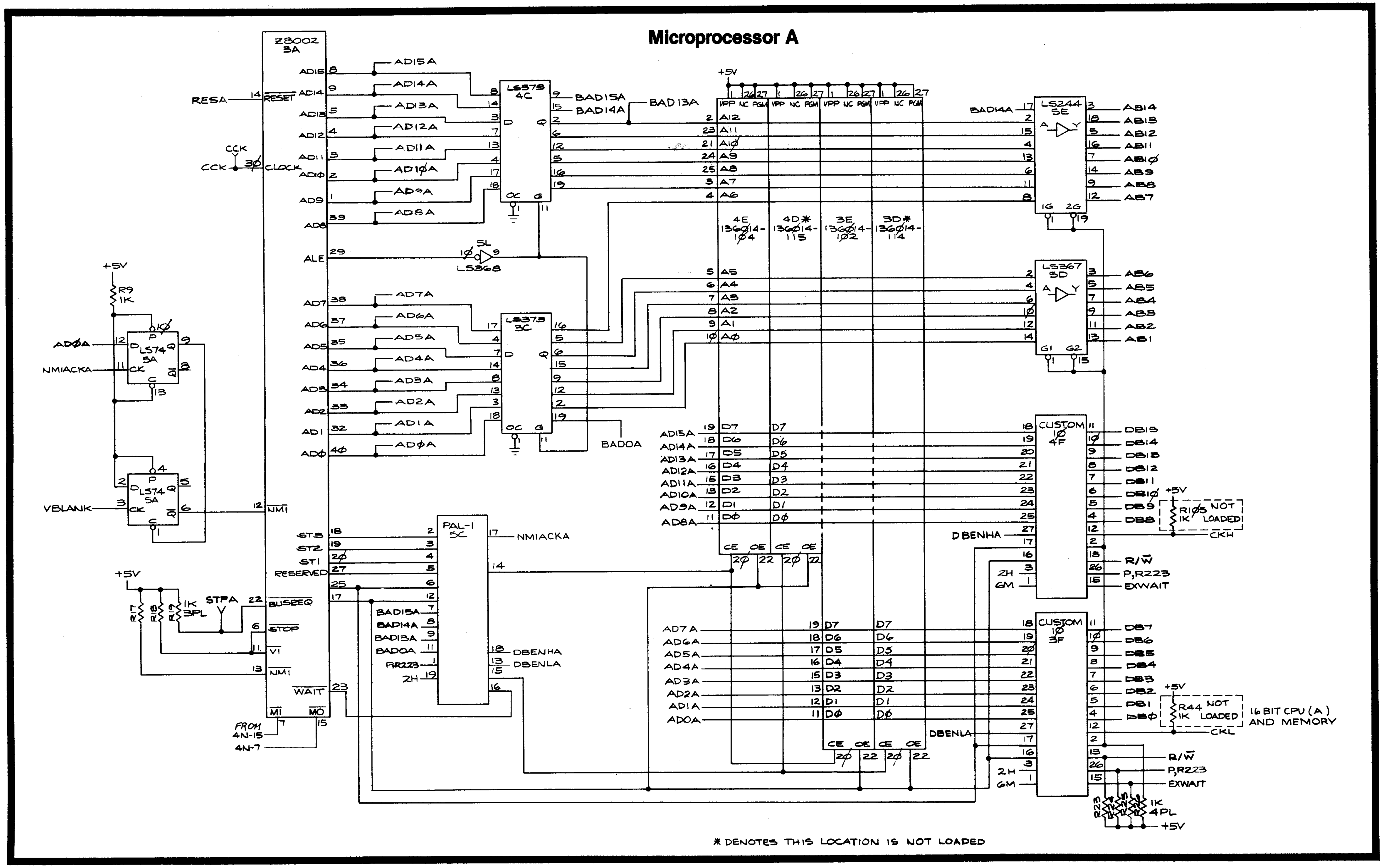
RAM Battery Back-Up Power



ATARI®

Pole Position CPU PCB Schematic Diagram

SP-218 Sheet 4B
8th printing



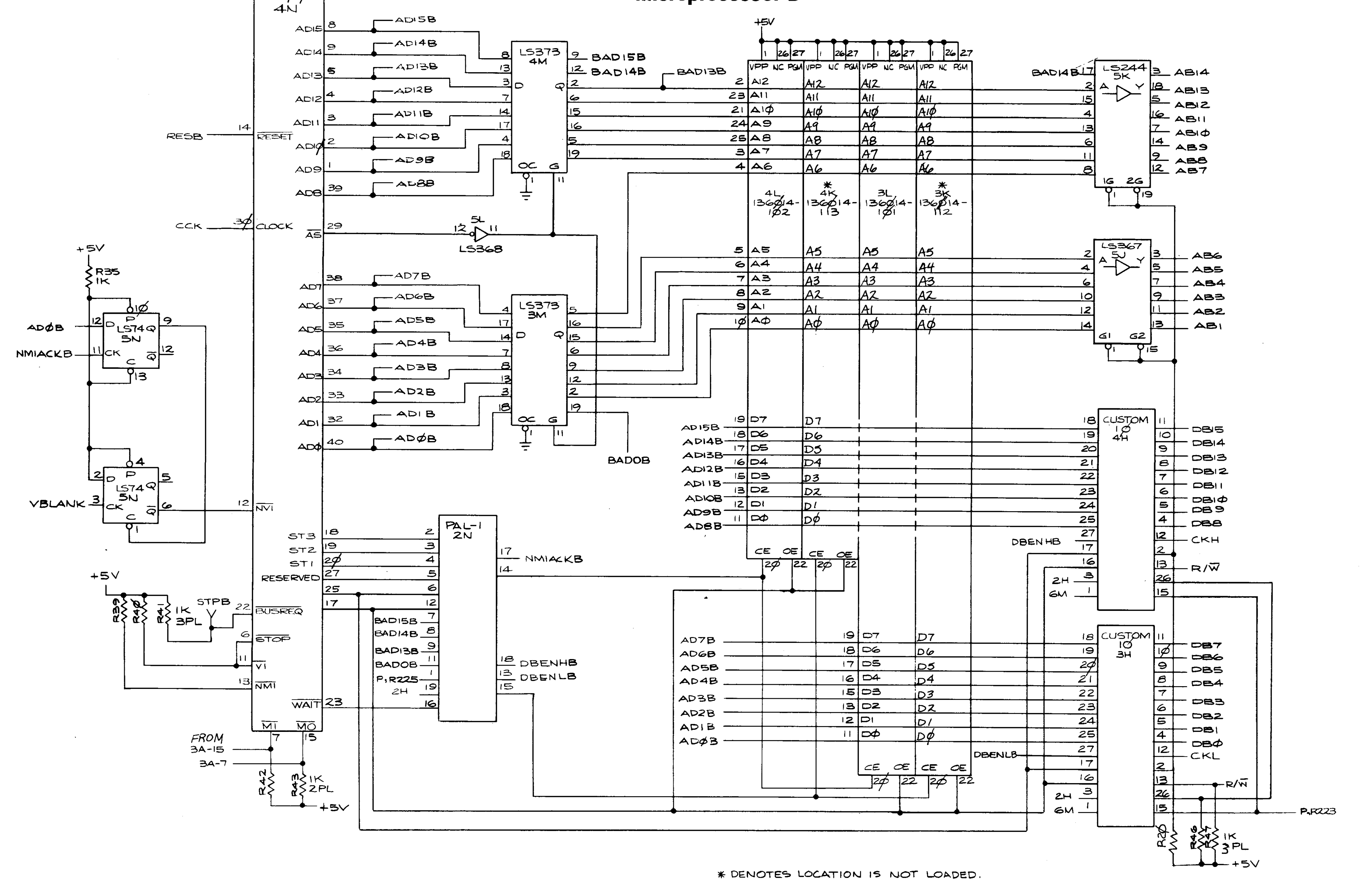
ATARI®

Pole Position CPU PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 5A
8th printing

Microprocessor B



ATARI®

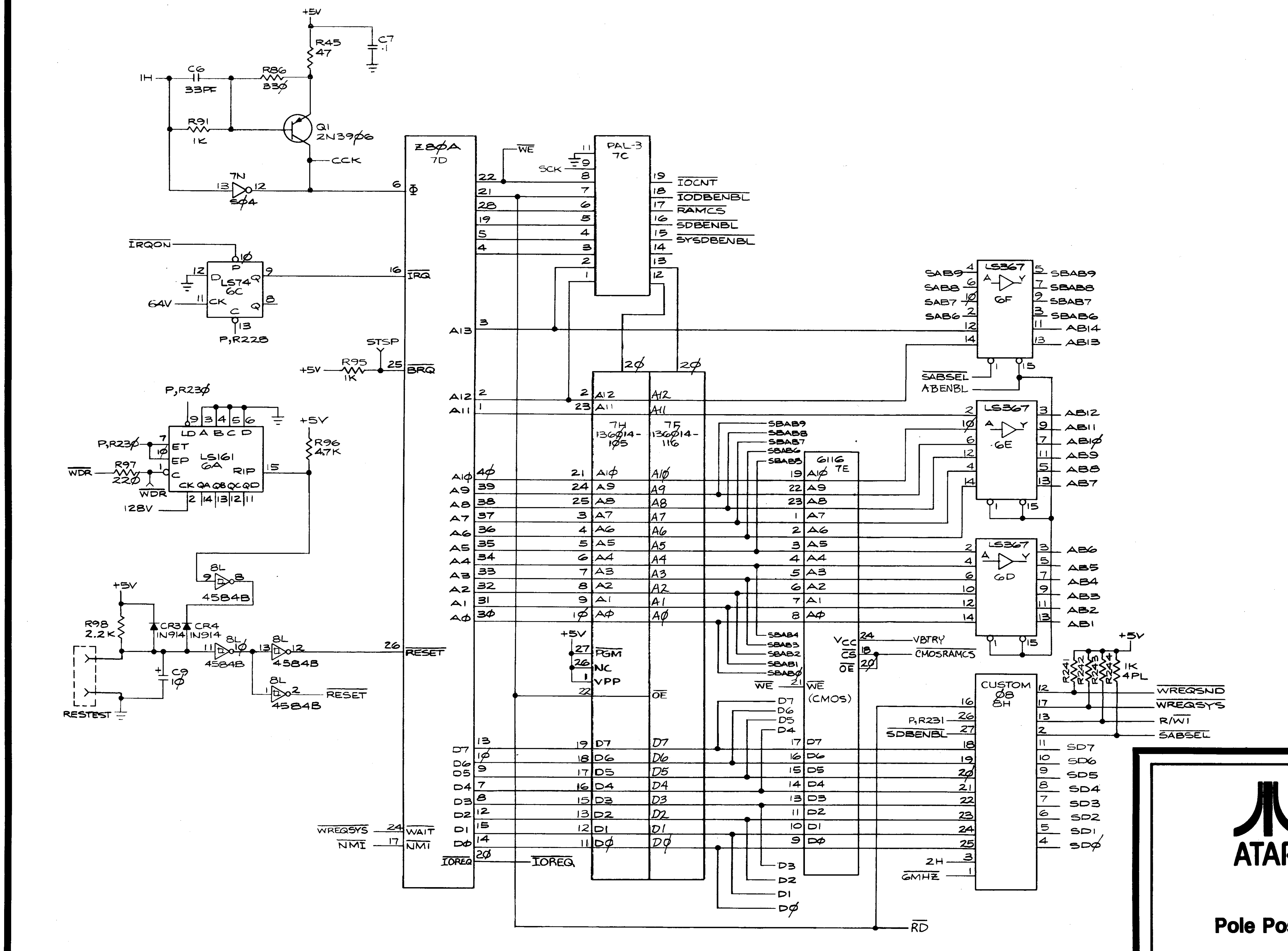
Pole Position CPU PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 5B

8th printing

Sound Microprocessor

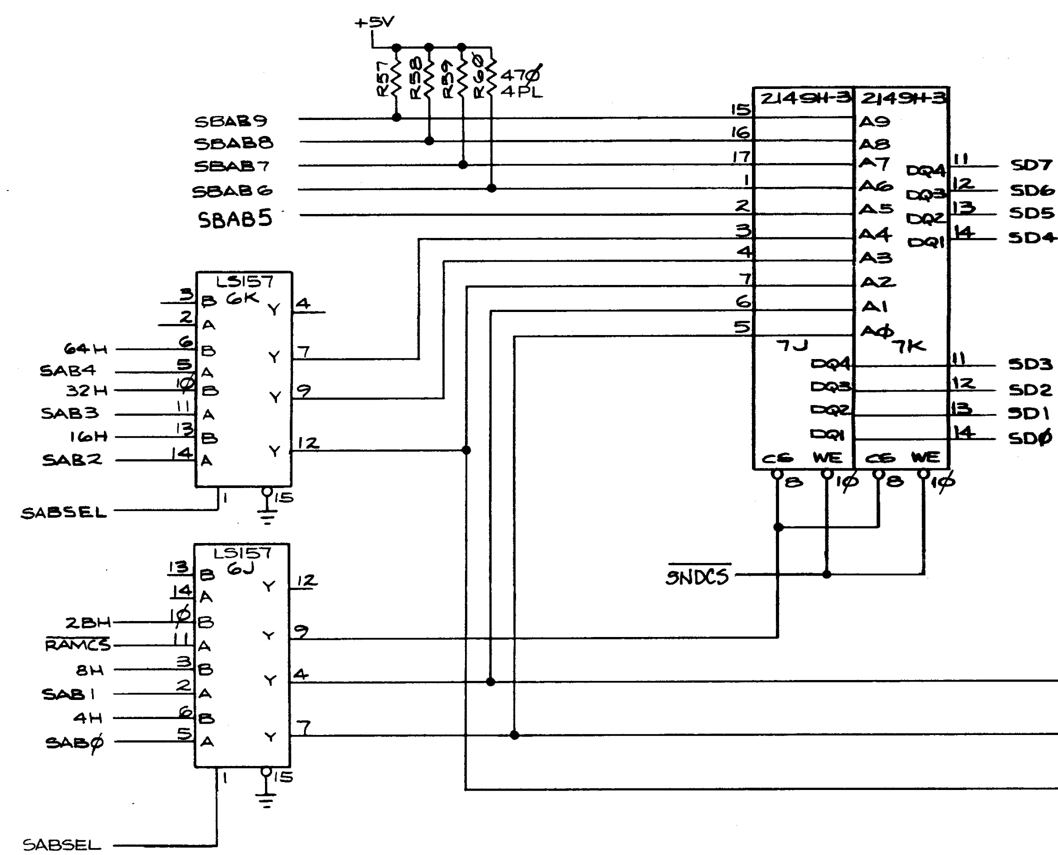


ATARI®

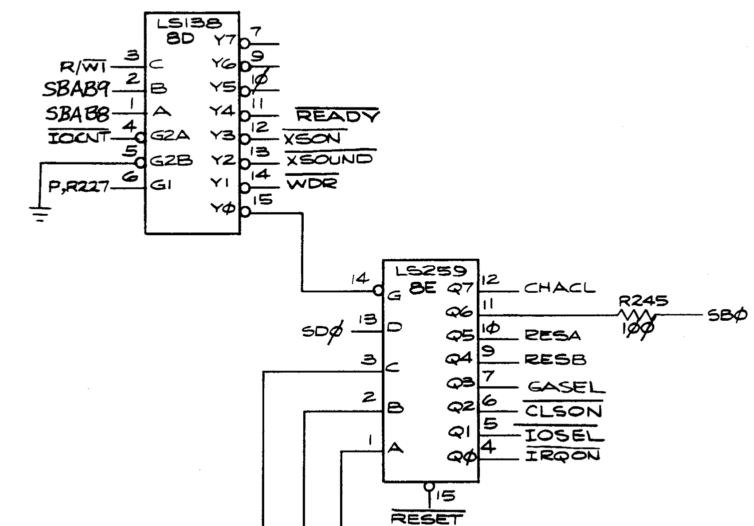
Pole Position CPU PCB Schematic Diagram

SP-218 Sheet 6A
8th printing

Sound Memory



Sound and I/O Address Decoders

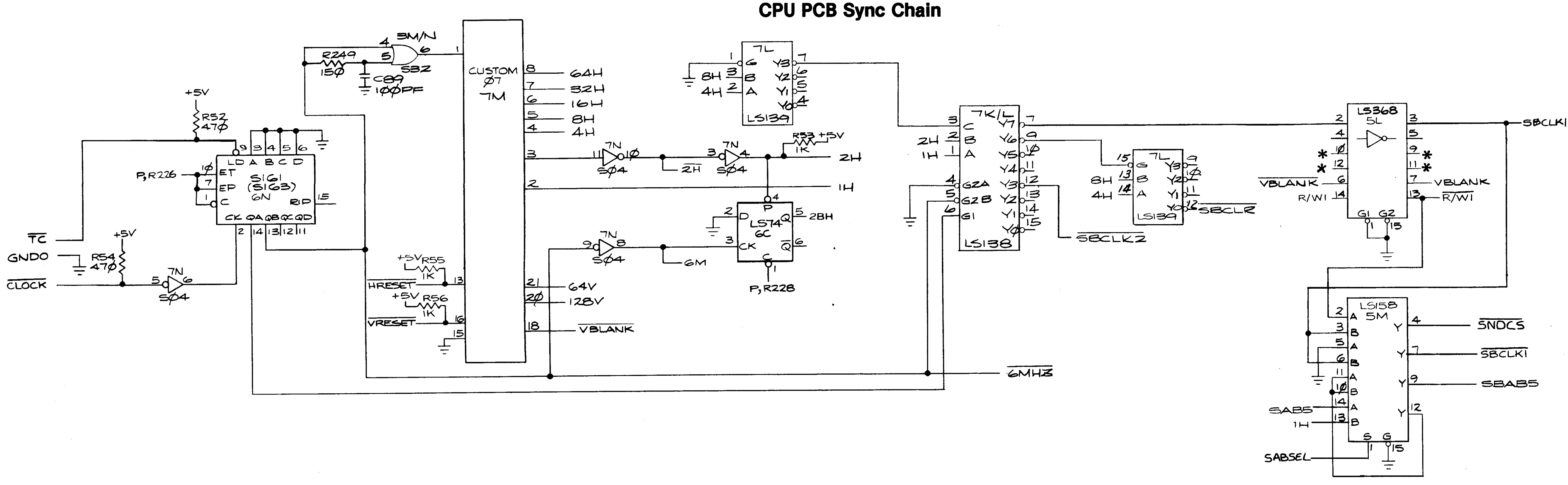


ATARI®

Pole Position CPU PCB Schematic Diagram

SP-218 Sheet 6B
8th printing

CPU PCB Sync Chain



* USED IN SHEET 5A +5B

ATARI®

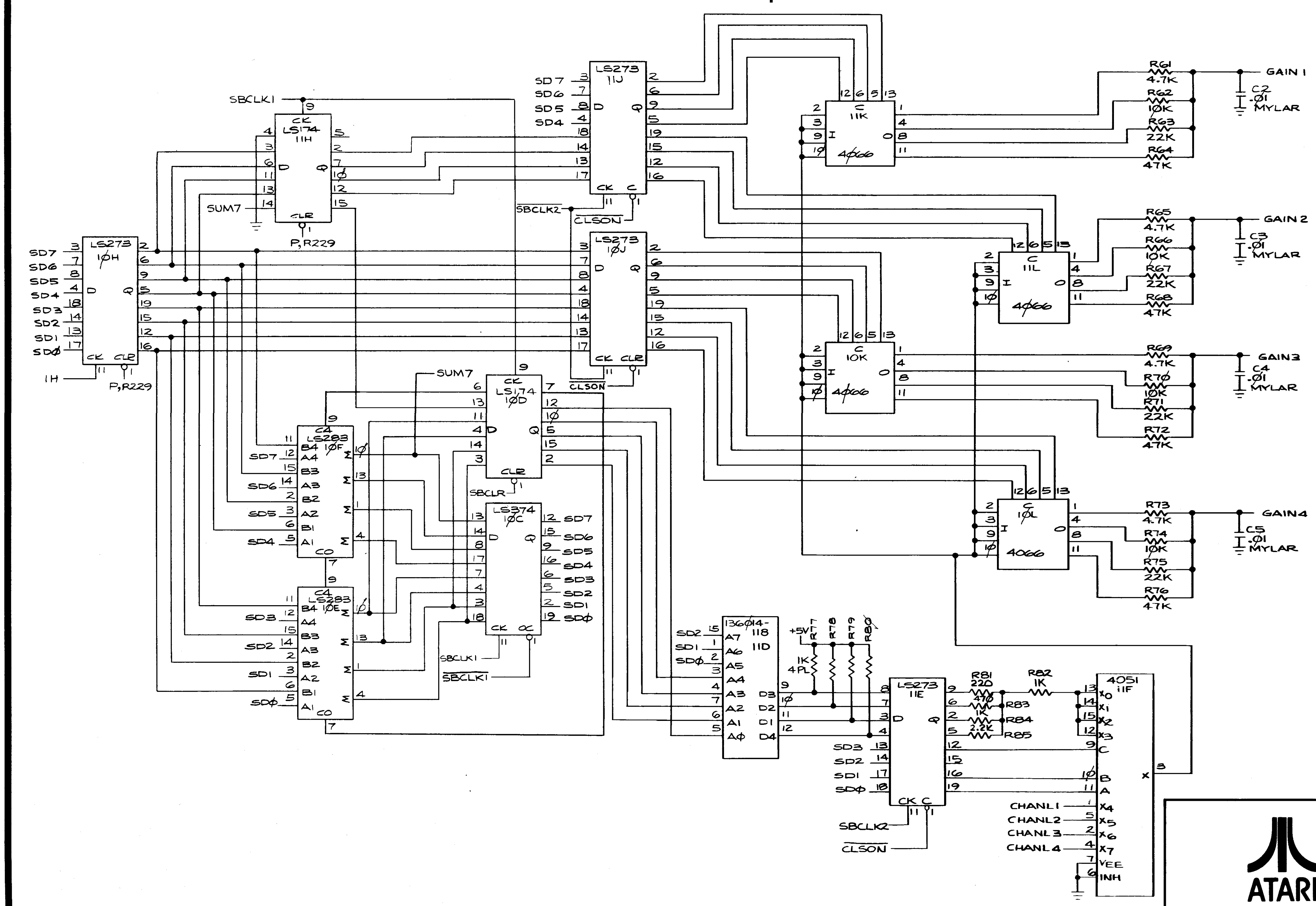
Pole Position CPU PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 7A

8th printing

Sound Buffers and Multiplexer



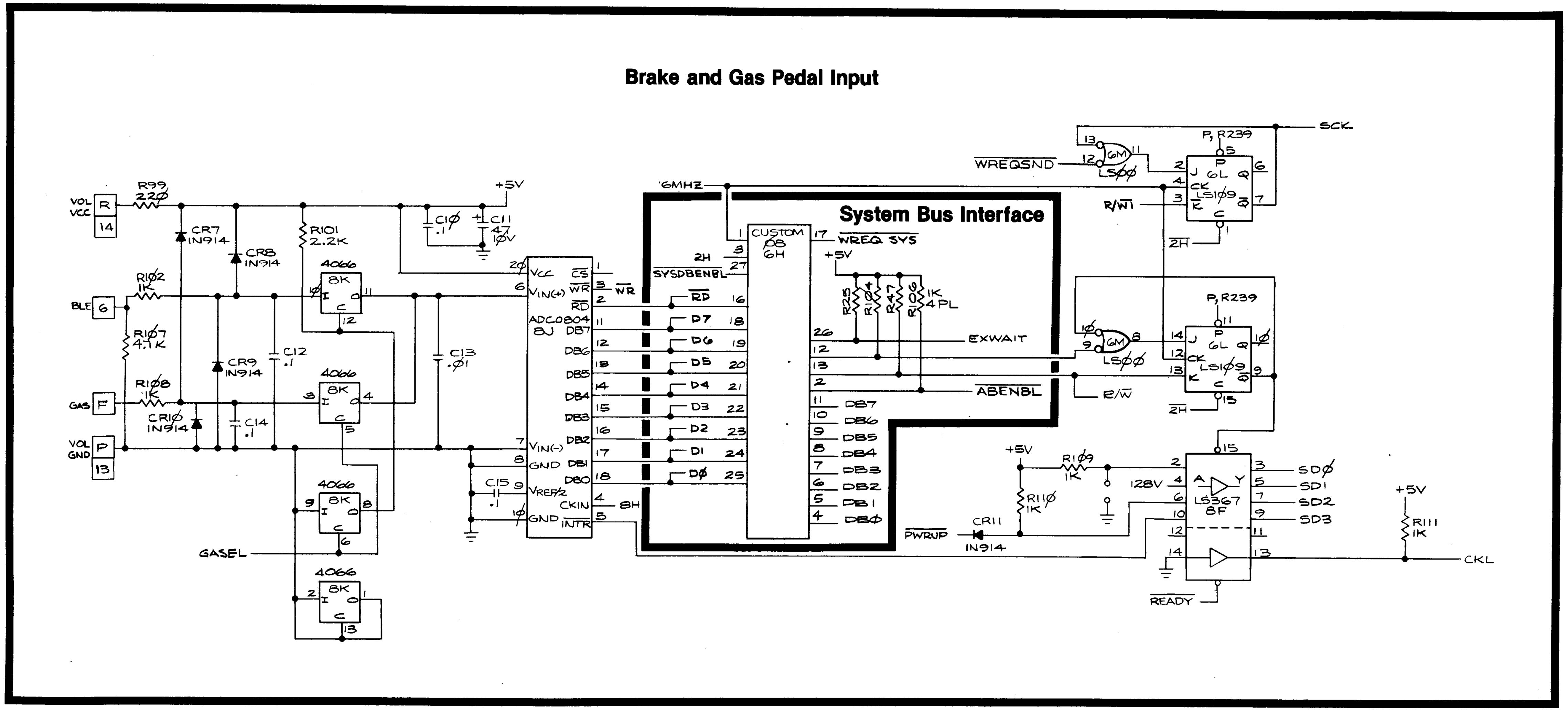
ATARI®

Pole Position CPU PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 7B

8th printing



ATARI®

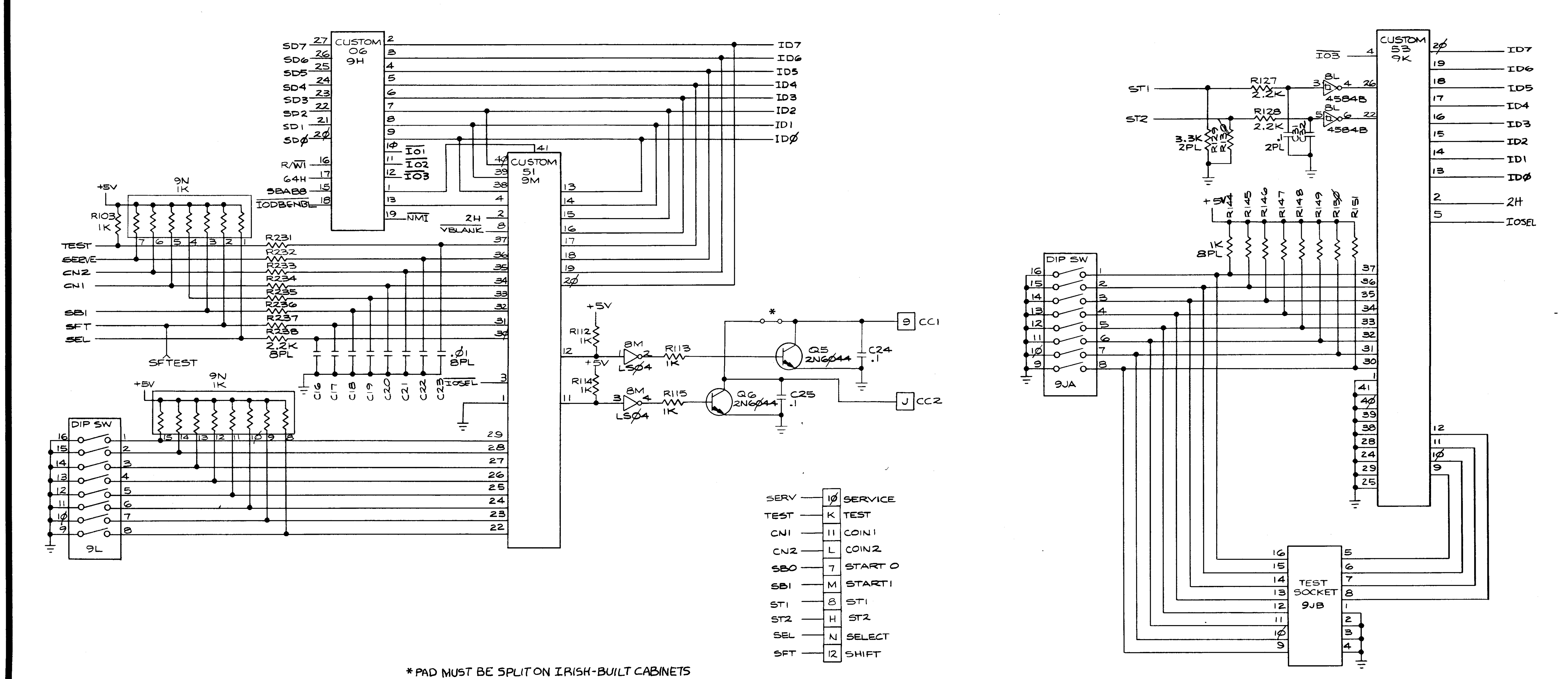
Pole Position CPU PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 8A

8th printing

Option Switch Input and I/O Interface



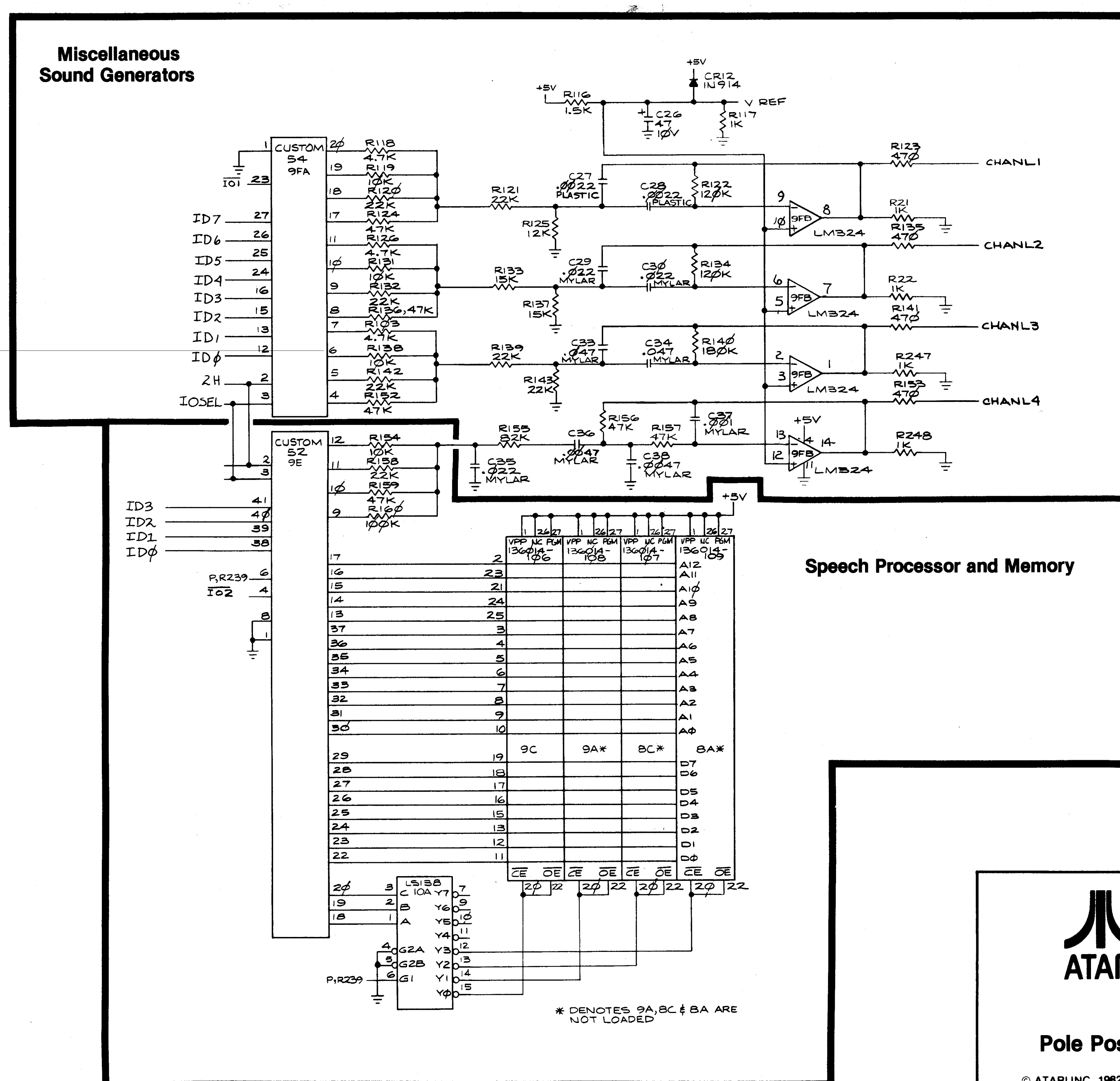
ATARI®

Pole Position CPU PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 8B

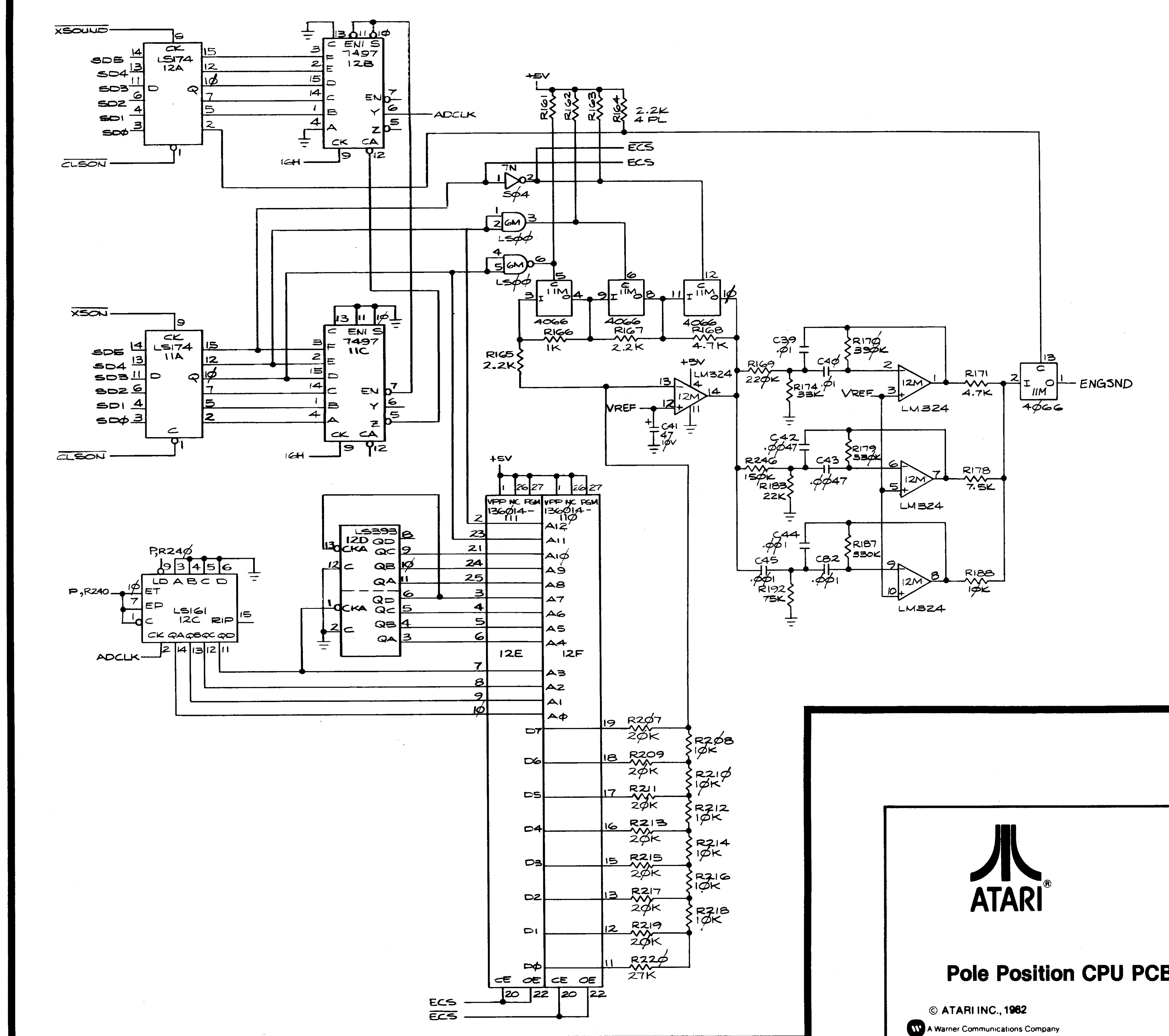
8th printing



Pole Position CPU PCB Schematic Diagram

SP-218 Sheet 9A
8th printing

Engine Sound Generator

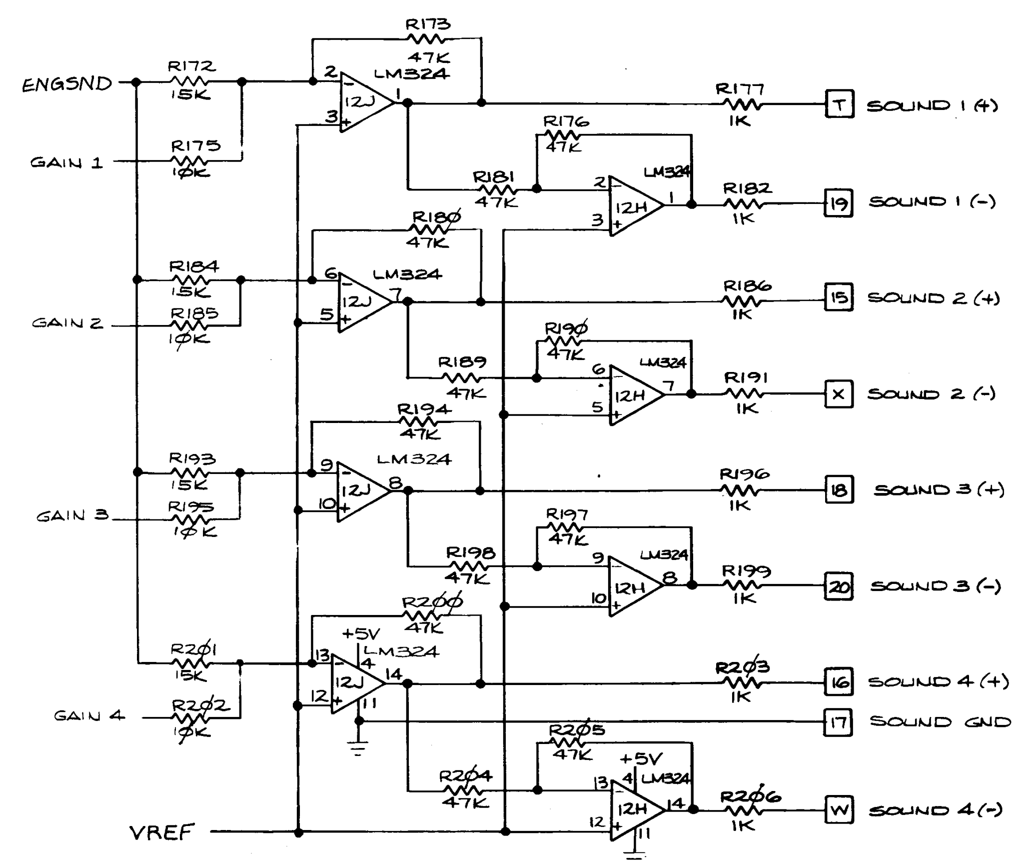


ATARI®

Pole Position CPU PCB Schematic Diagram

SP-218 Sheet 9B
8th printing

Sound Output



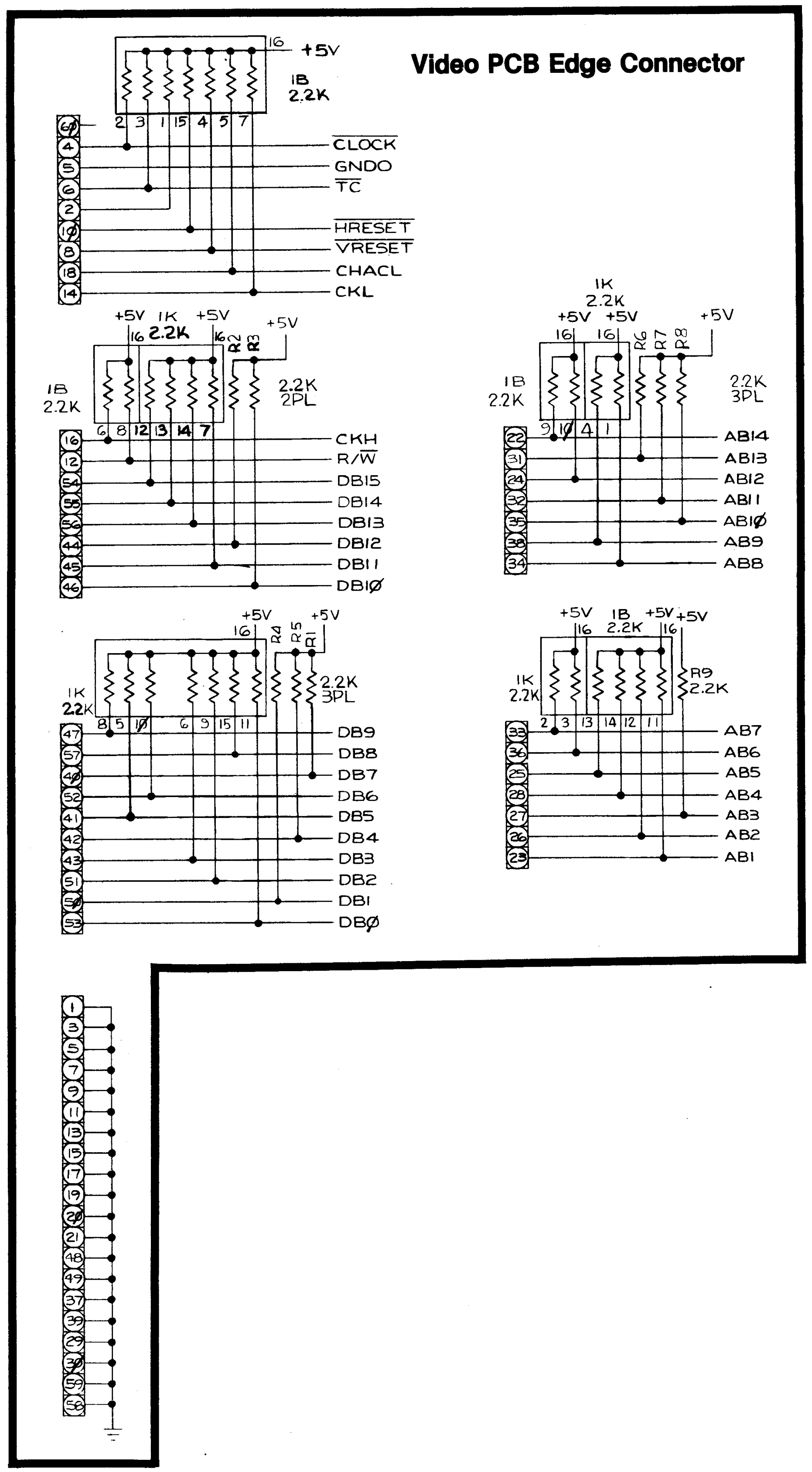
ATARI®

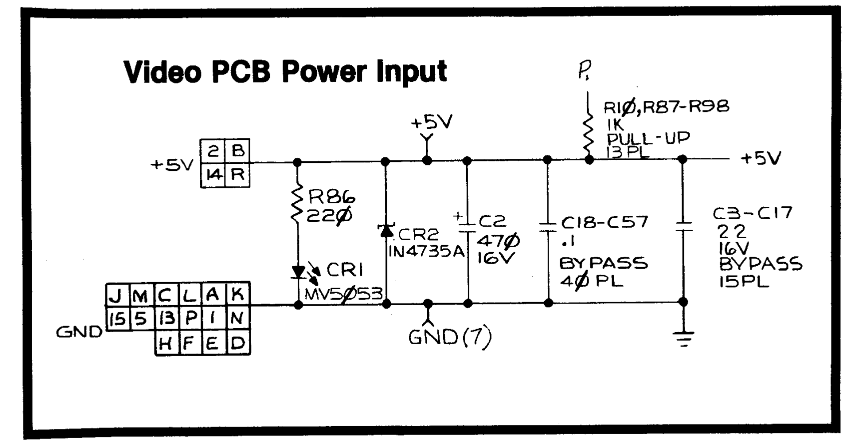
Pole Position CPU PCB Schematic Diagram

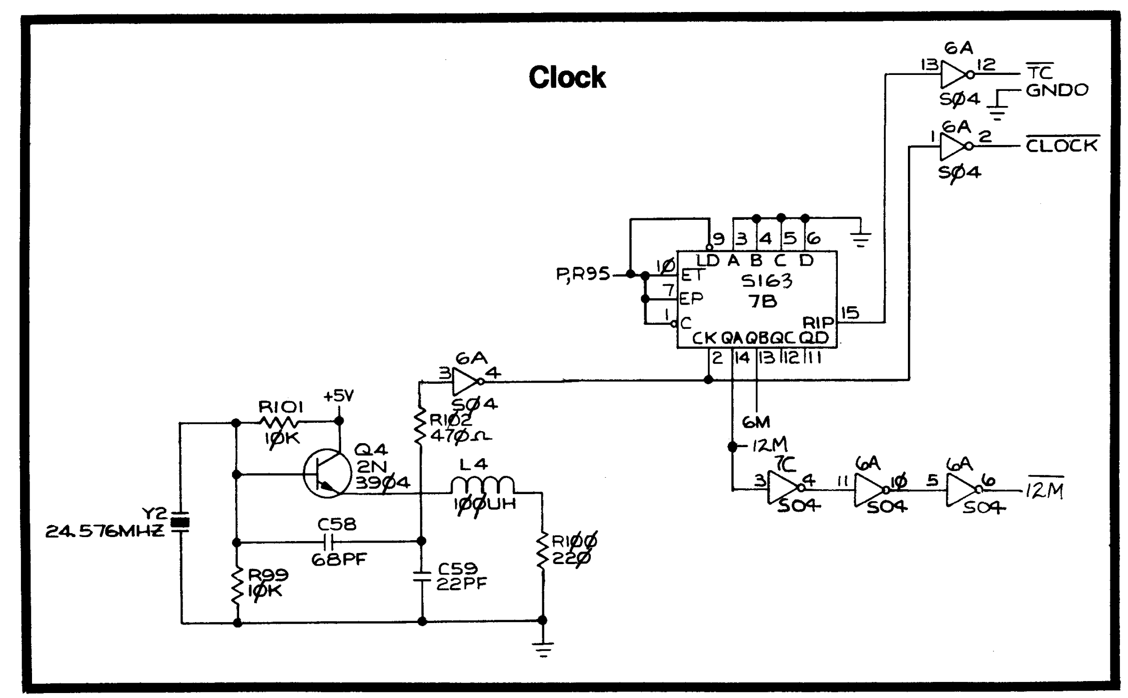
A Warner Communications Company

SP-218 Sheet 10A

8th printing





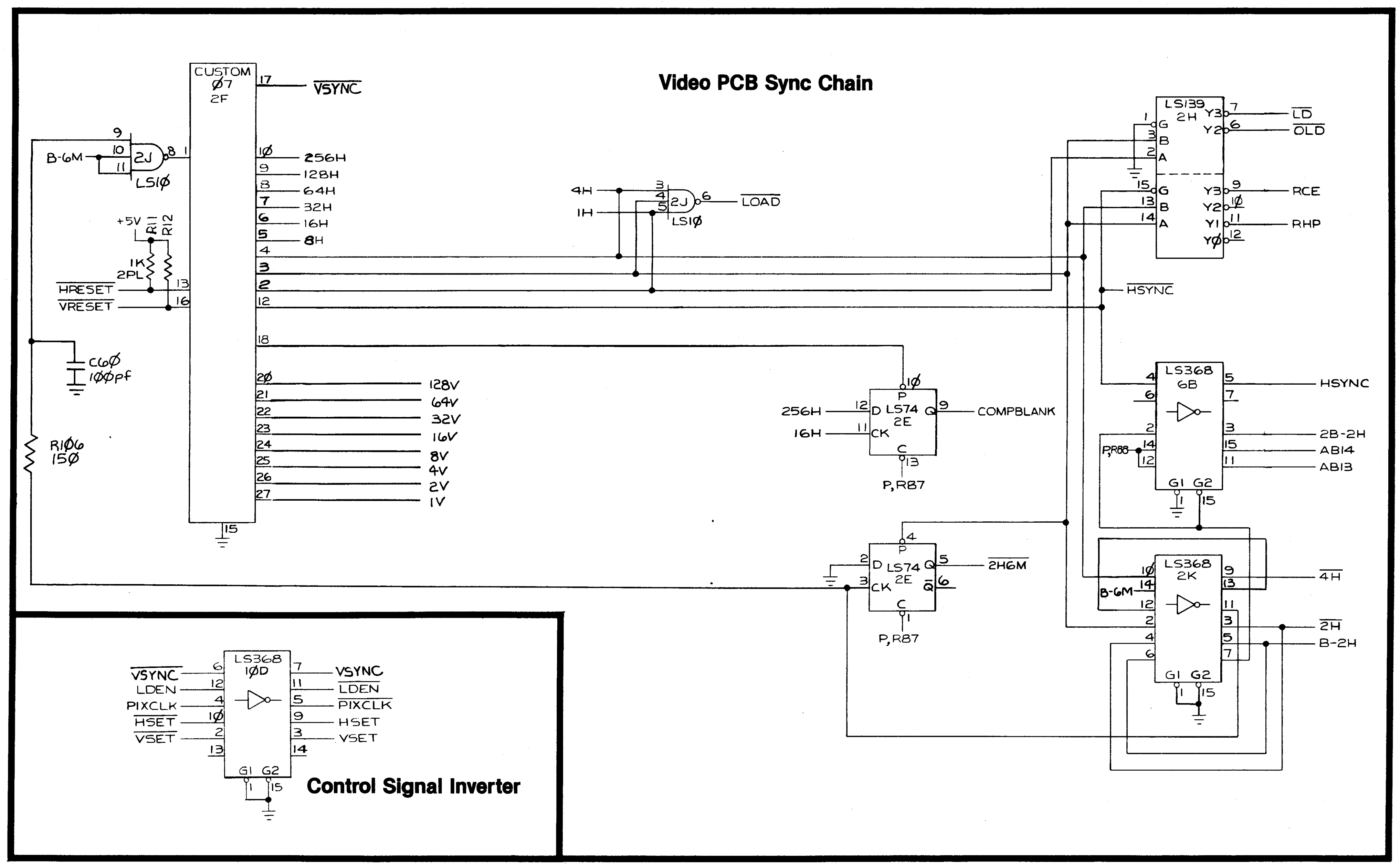


ATARI®

Pole Position Video PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 10B
8th printing

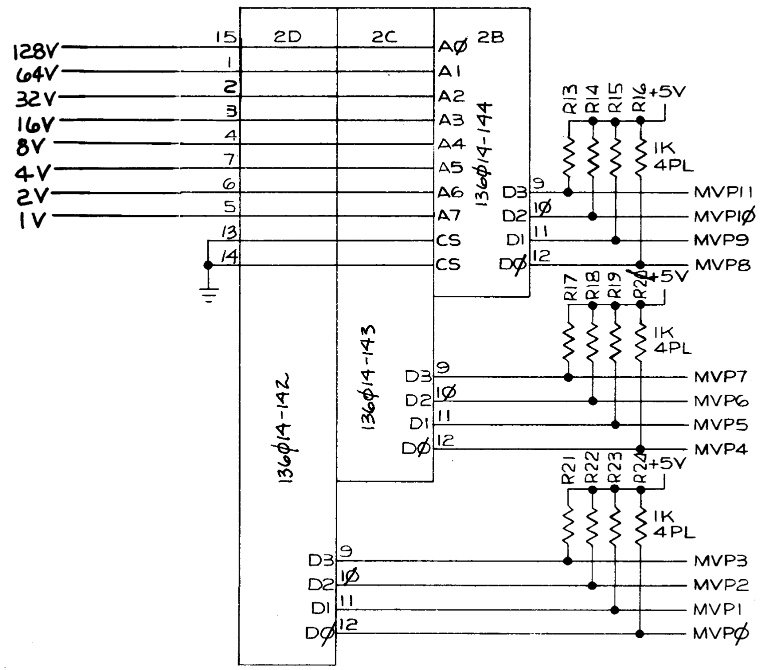


ATARI®

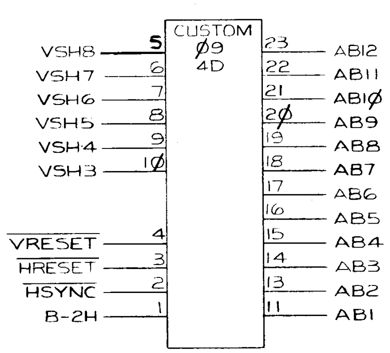
Pole Position Video PCB Schematic Diagram

SP-218 Sheet 11A
8th printing

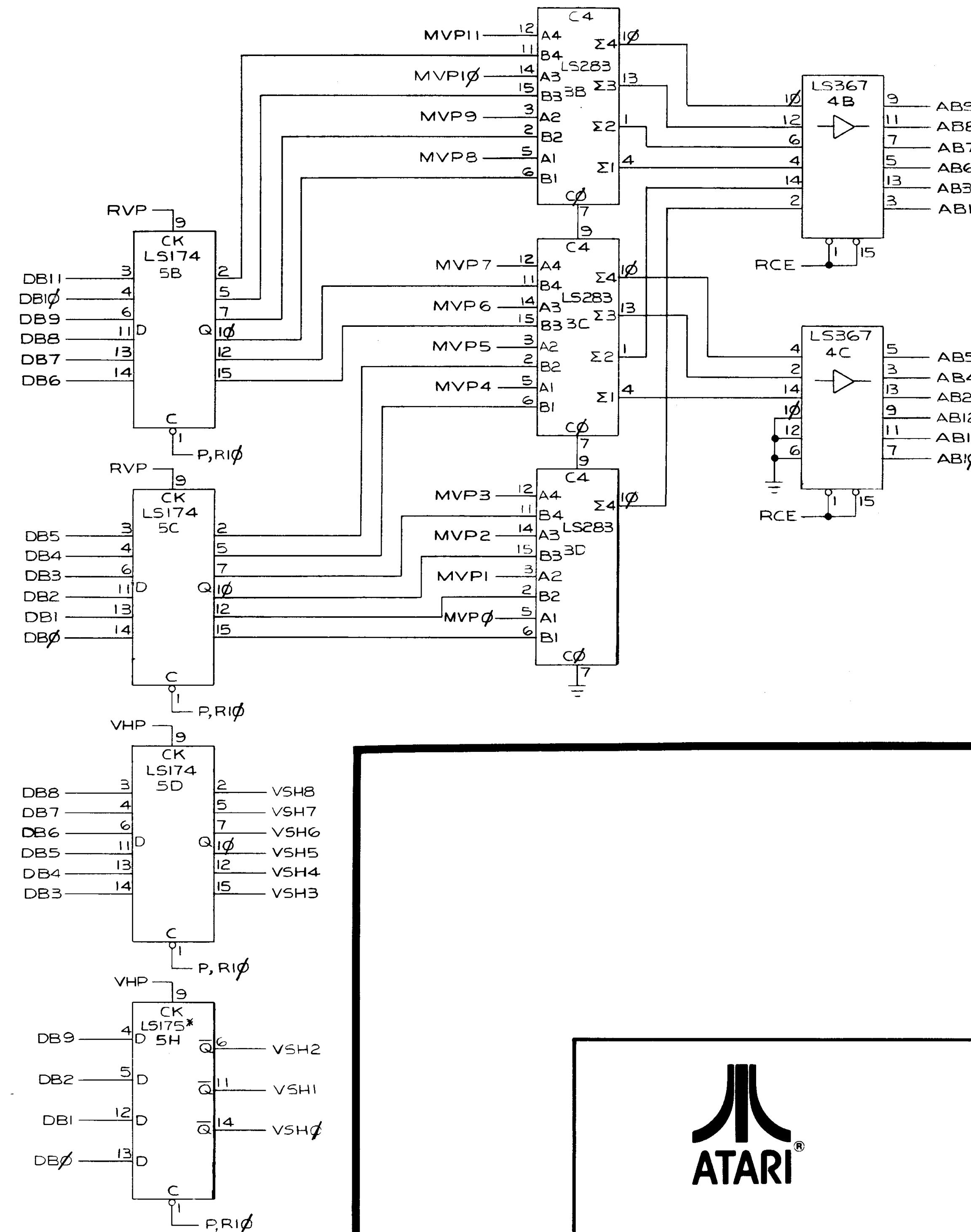
Vertical Position Modifiers



Address Bus Interface



Vertical Position Buffers and Adders



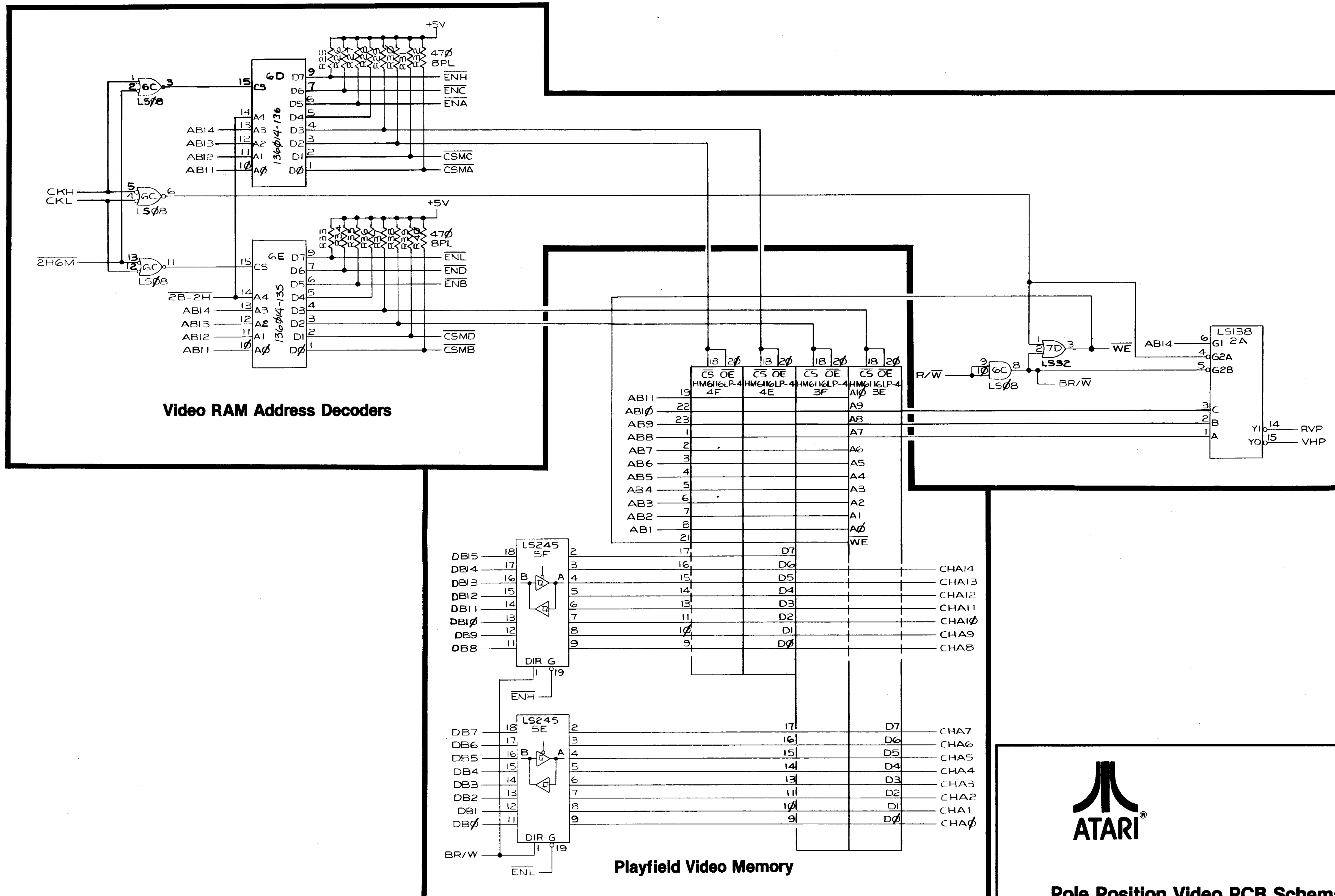
*MANUFACTURER MUST BE TEXAS INSTRUMENTS

ATARI®

Pole Position Video PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 11B
8th printing

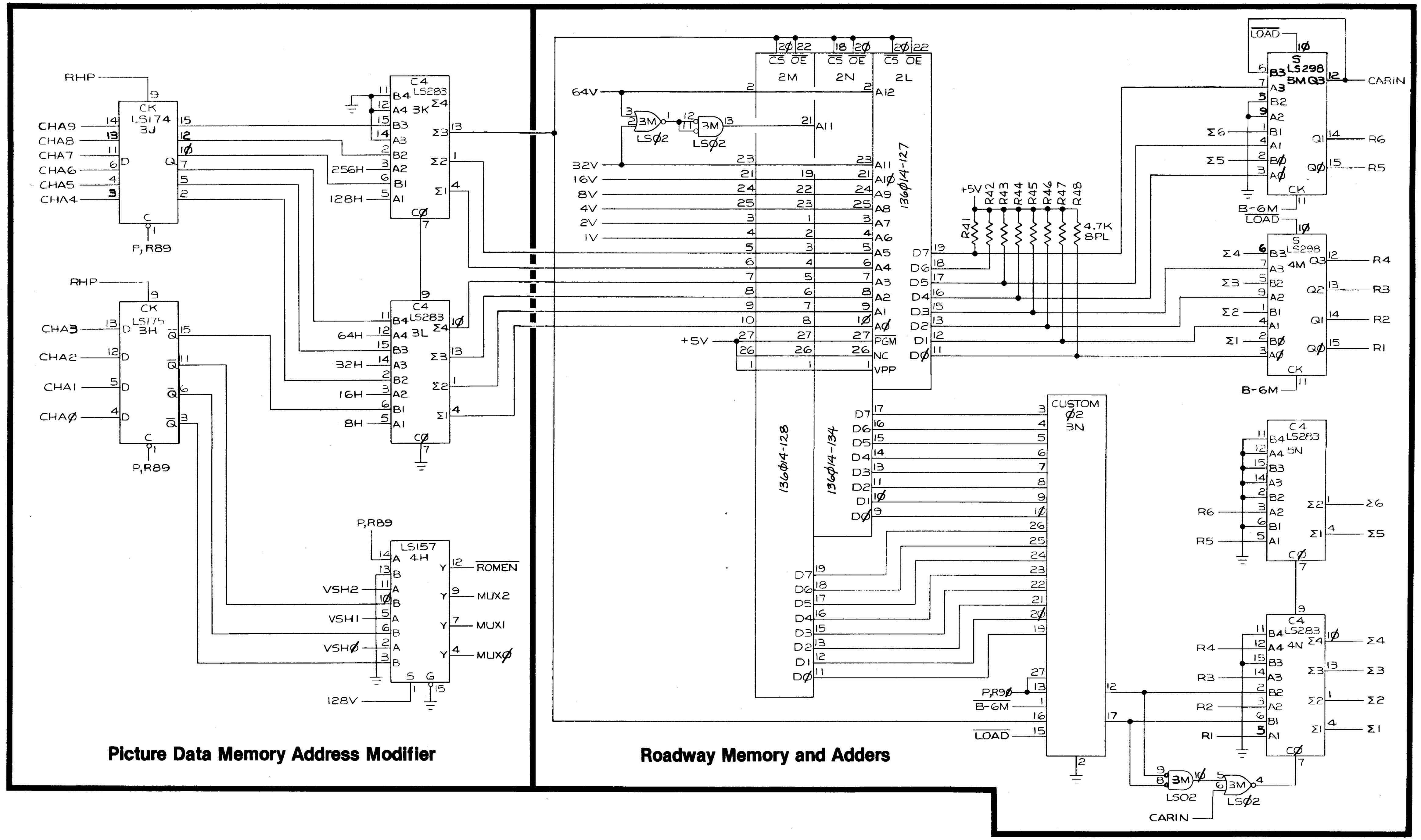


ATARI®

Pole Position Video PCB Schematic Diagram

SP-218 Sheet 12A

8th printing



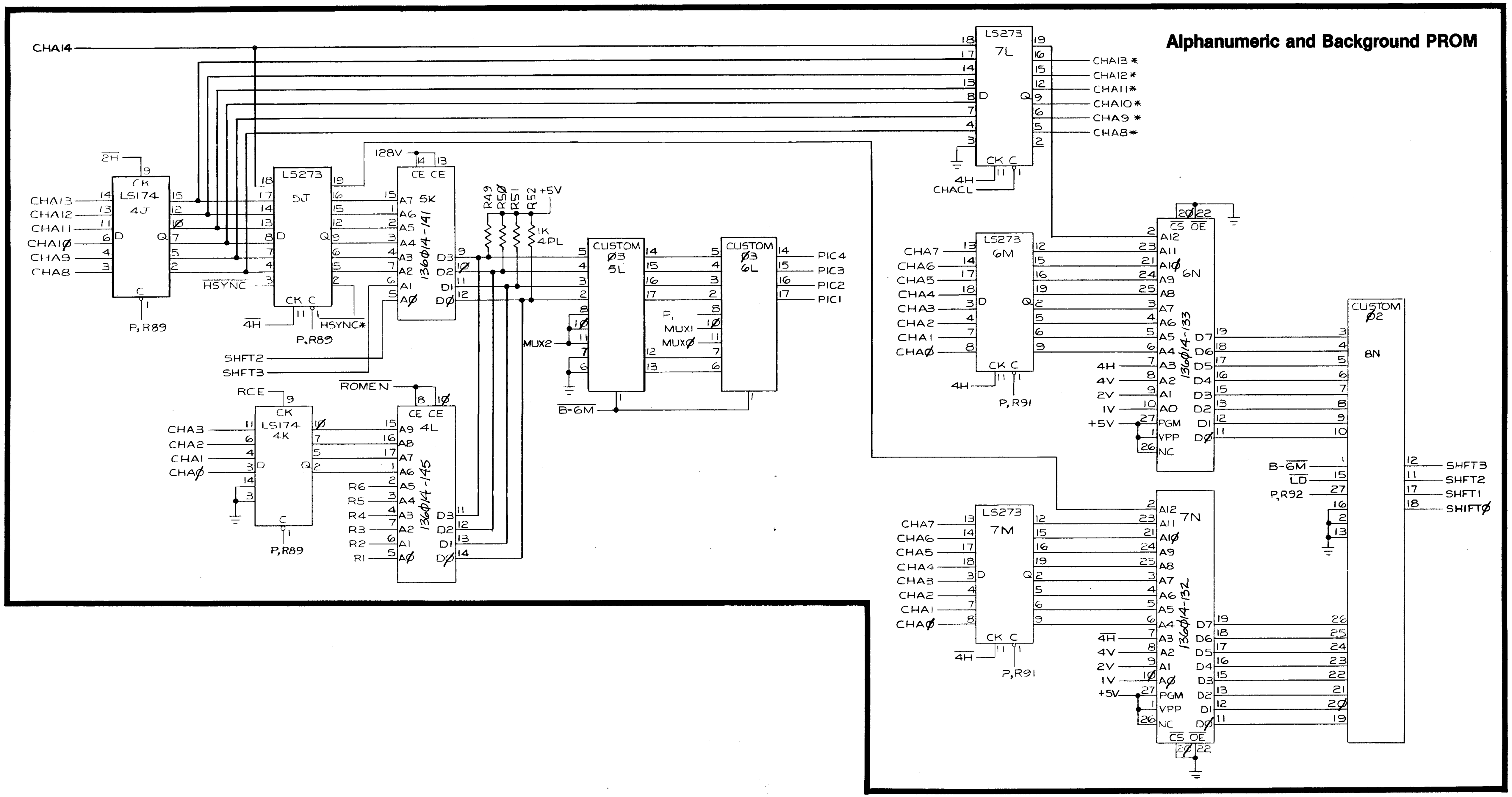
ATARI®

Pole Position Video PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 12B
8th printing

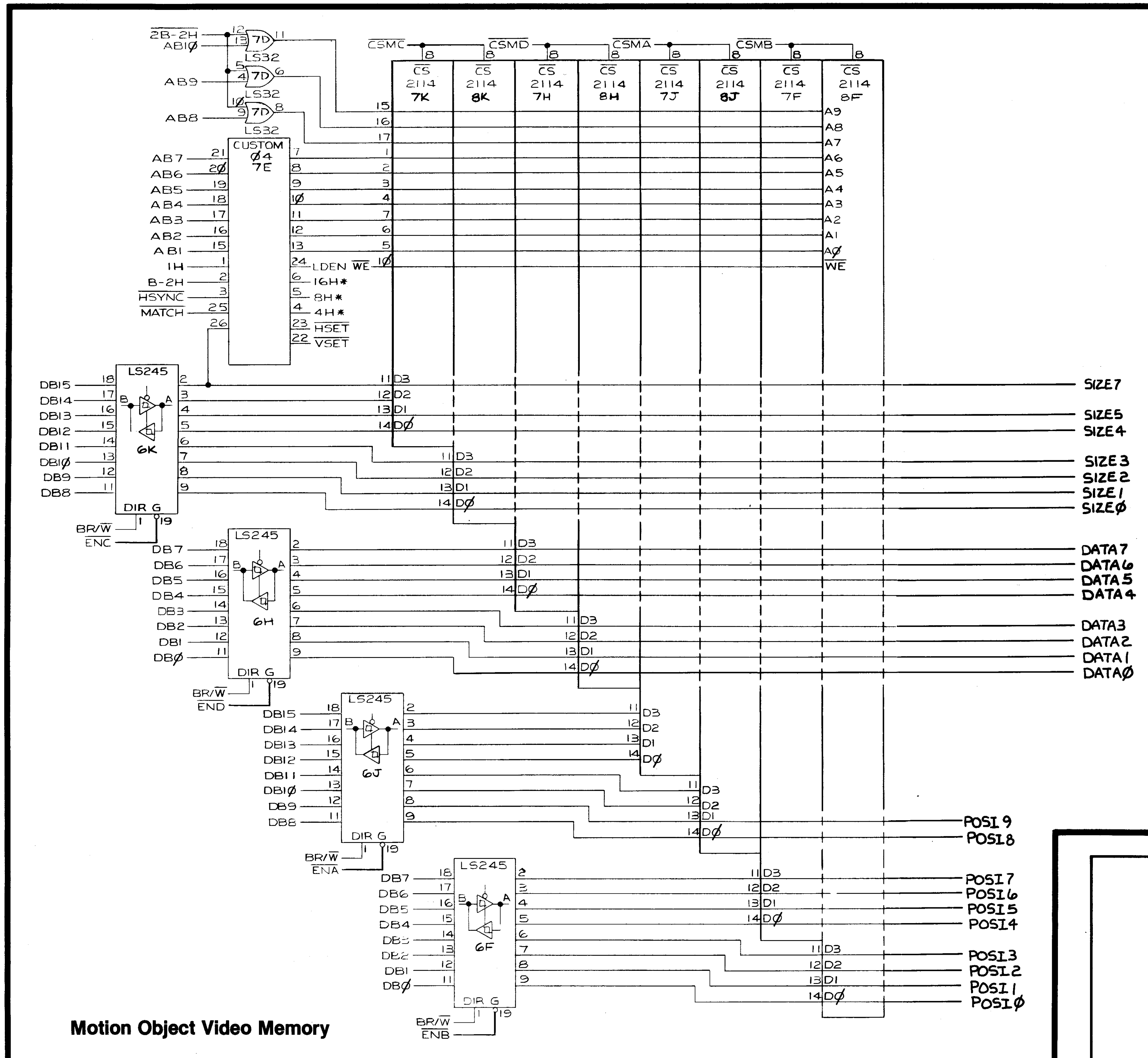
Alphanumeric and Background PROM



ATARI®

Pole Position Video PCB Schematic Diagram

SP-218 Sheet 13A
8th printing



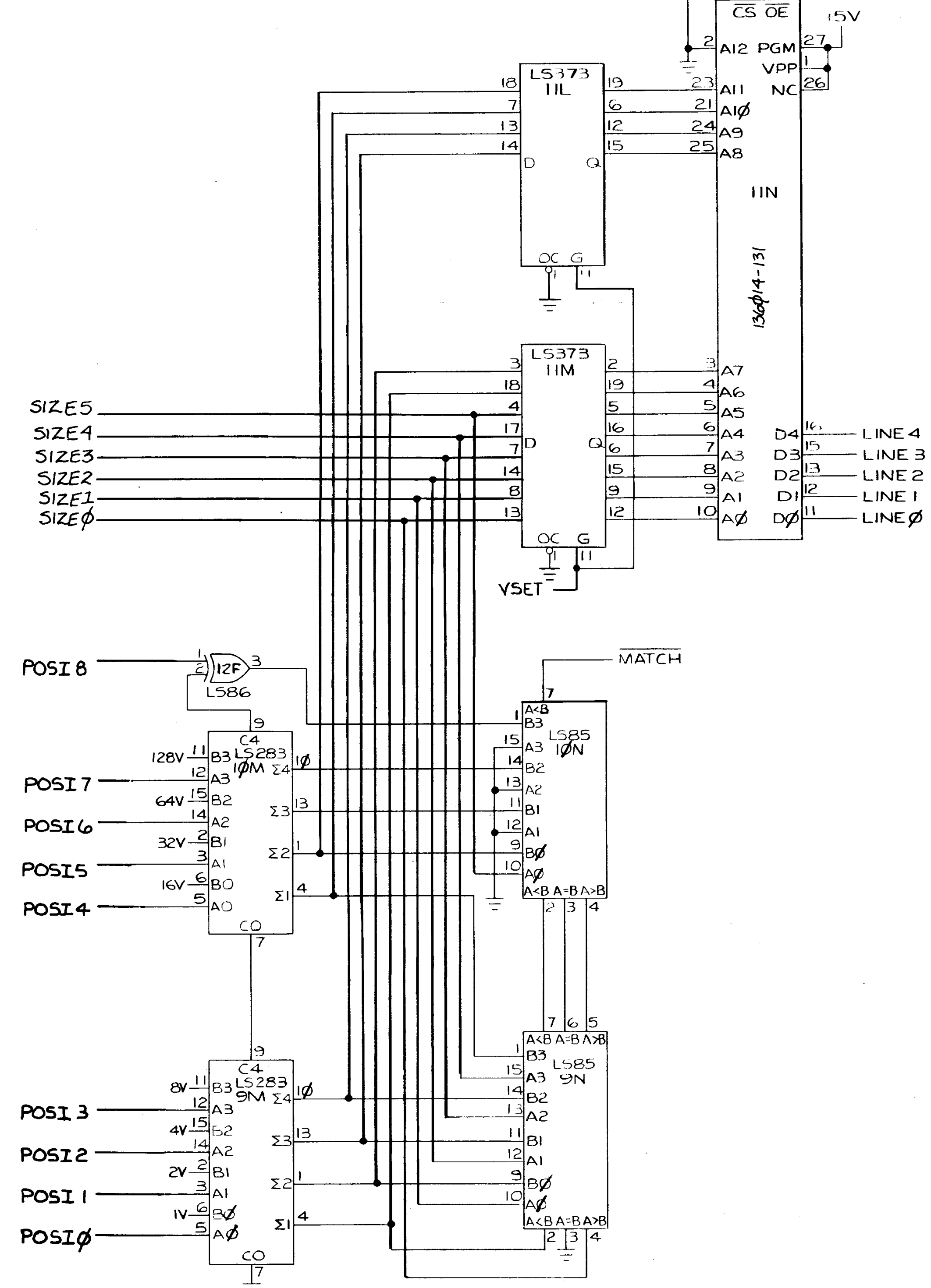
Motion Object Video Memory

ATARI®

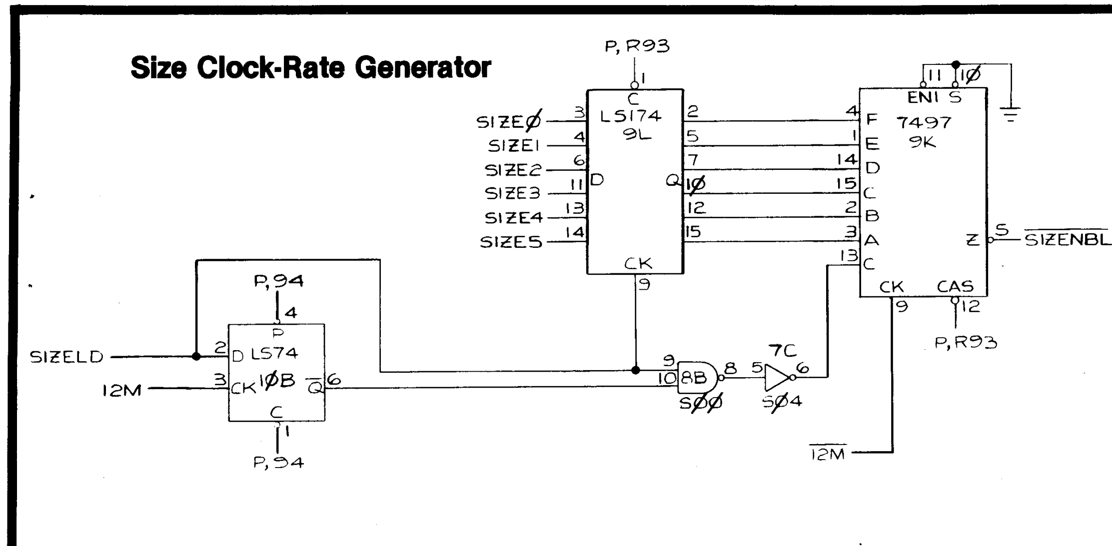
Pole Position Video PCB Schematic Diagram

SP-218 Sheet 13B
8th printing

Match Circuit



Size Clock-Rate Generator

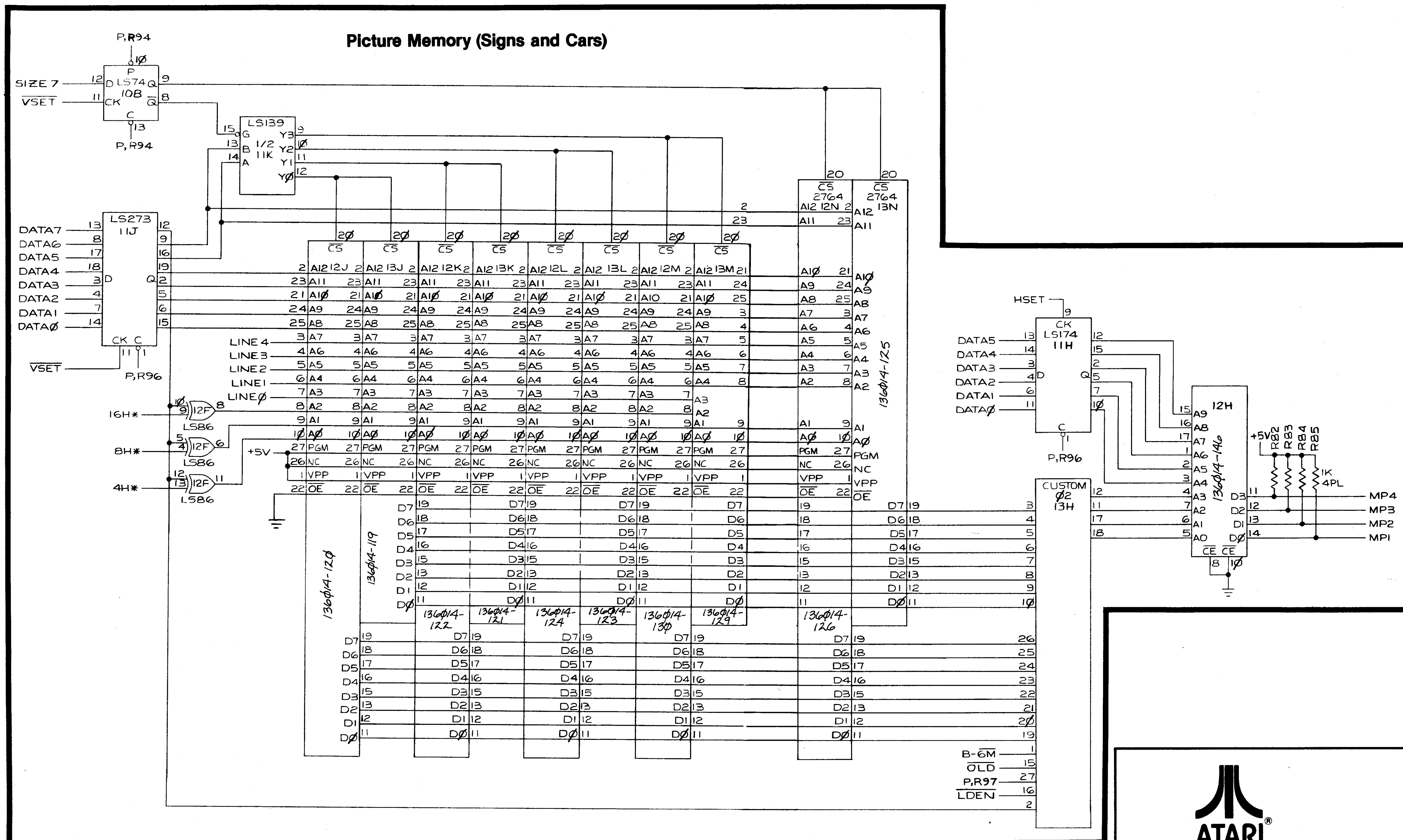


ATARI®

Pole Position Video PCB Schematic Diagram

SP-218 Sheet 14A

8th printing

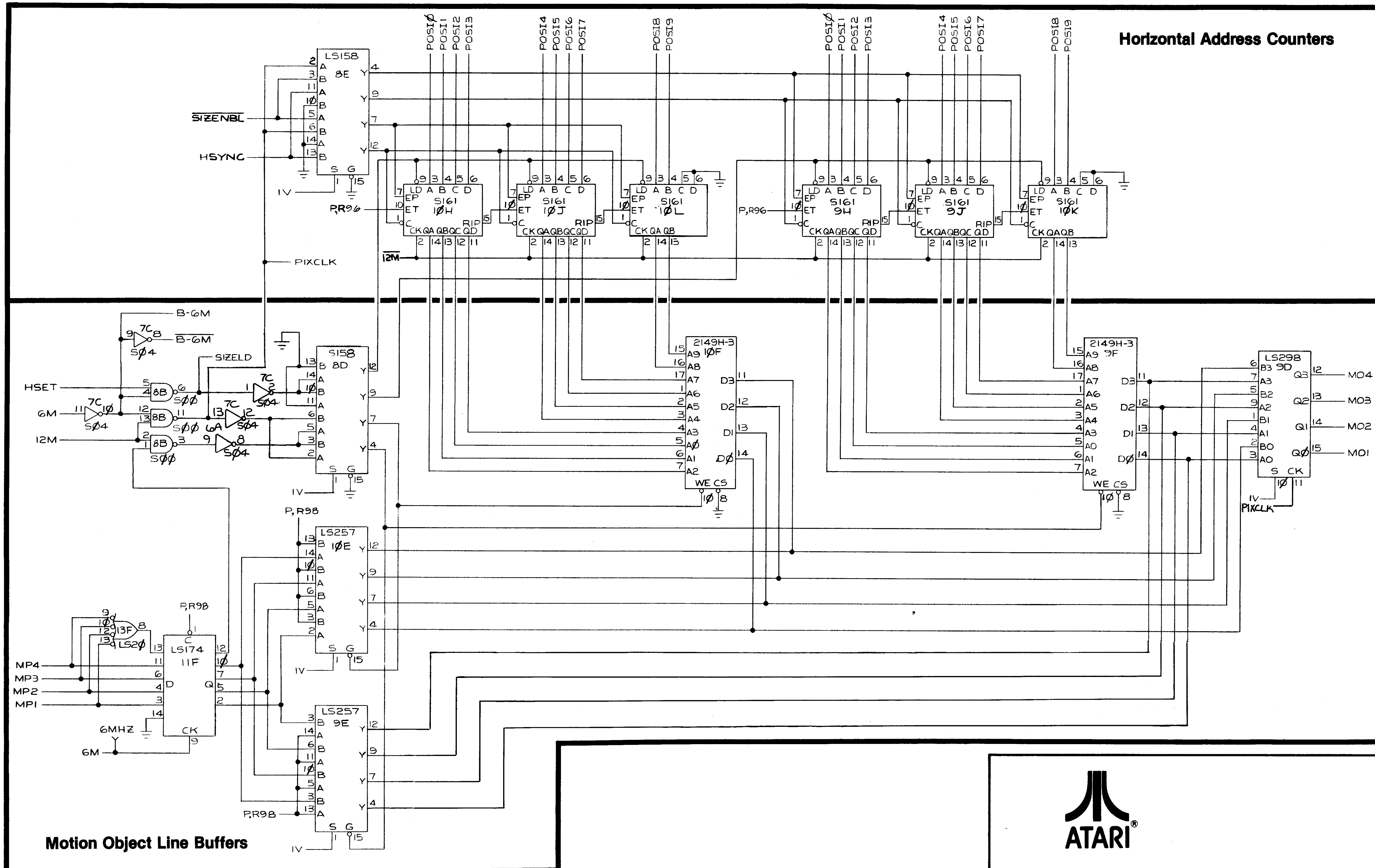


ATARI®

Pole Position Video PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 14B
8th printing



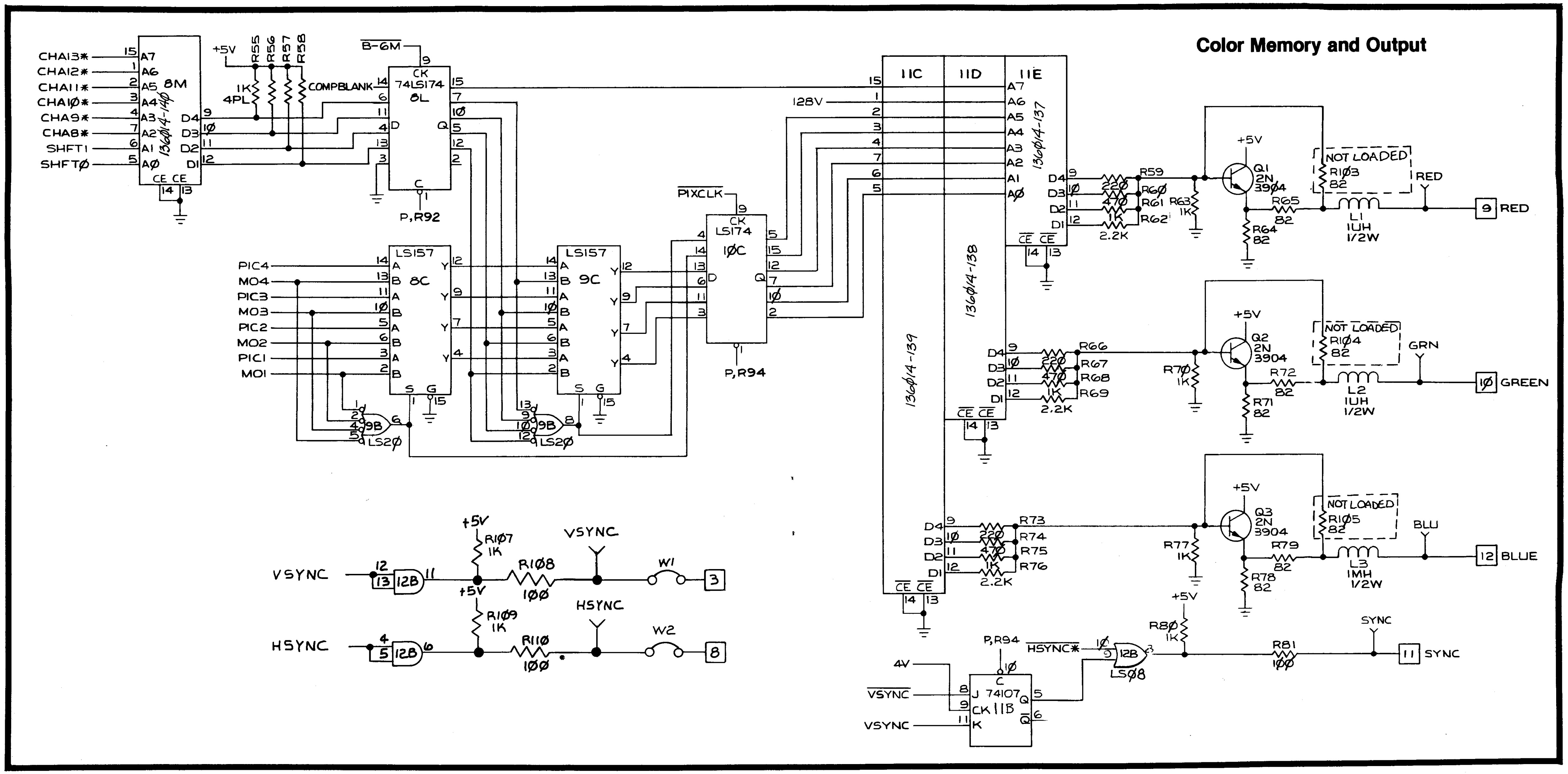
ATARI®

Pole Position Video PCB Schematic Diagram

SP-218 Sheet 15A

8th printing

A Warner Communications Company



ATARI®

Pole Position Video PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 15B

8th printing

Electrohome 19-Inch Color Raster-Scan Video Display Schematic Diagram

Schematic Notes

Unless otherwise specified

Resistance: (Ω) (K→KΩ, M→MΩ), 1/4 (W) carbon resistor

Capacitance: 1 or higher→ (pF), less than 1→ (μF)
working voltage→ 50 (V)
ceramic capacitor

Inductance: (μH)

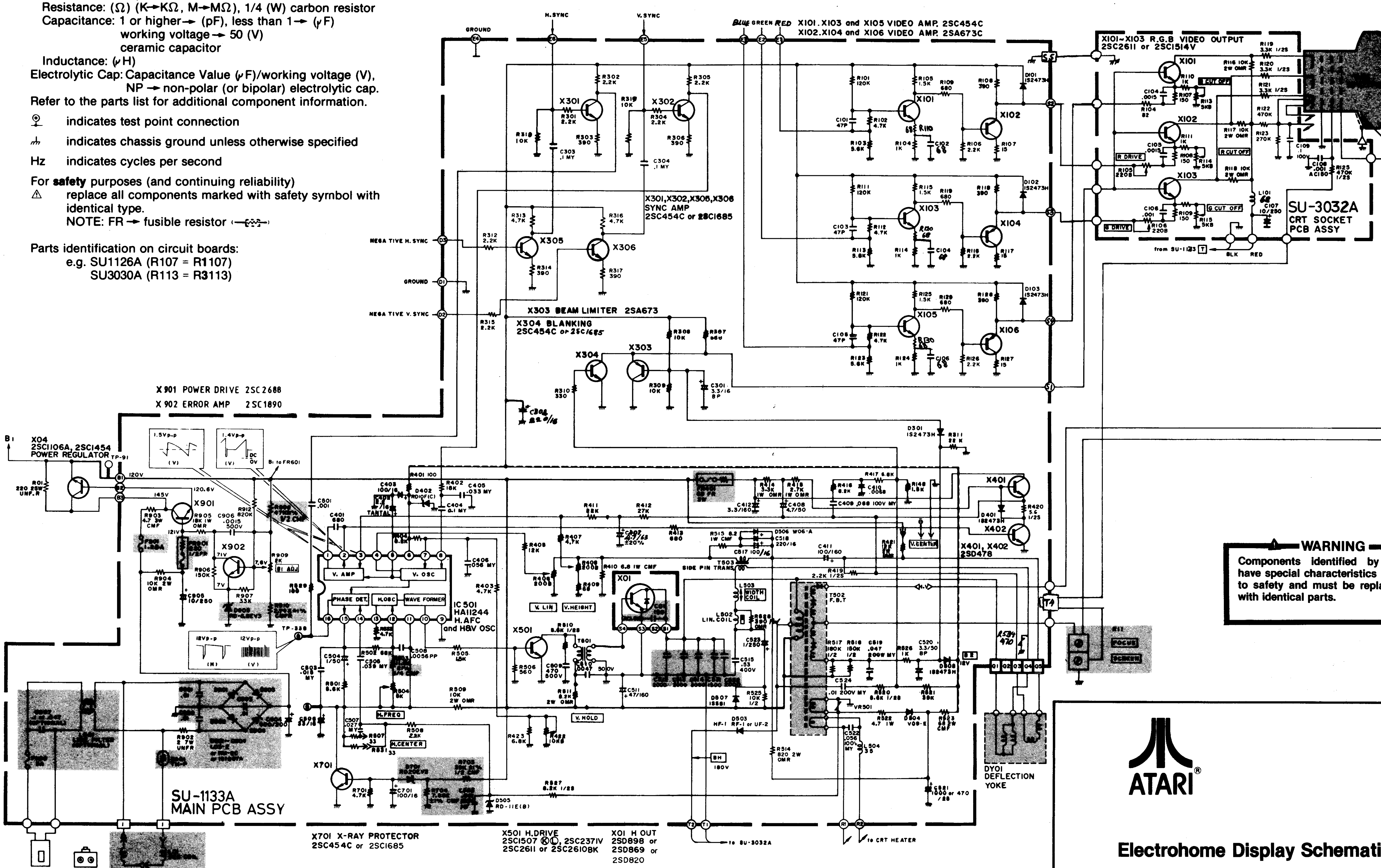
Electrolytic Cap: Capacitance Value (μF)/working voltage (V),
NP → non-polar (or bipolar) electrolytic cap.

Refer to the parts list for additional component information.

- (test point symbol) indicates test point connection
- (ground symbol) indicates chassis ground unless otherwise specified
- Hz indicates cycles per second

For **safety** purposes (and continuing reliability)
⚠ replace all components marked with safety symbol with identical type.
NOTE: FR → fusible resistor

Parts identification on circuit boards:
e.g. SU1126A (R107 = R1107)
SU3030A (R113 = R3113)



⚠ WARNING ⚠

Components identified by shading have special characteristics important to safety and must be replaced only with identical parts.

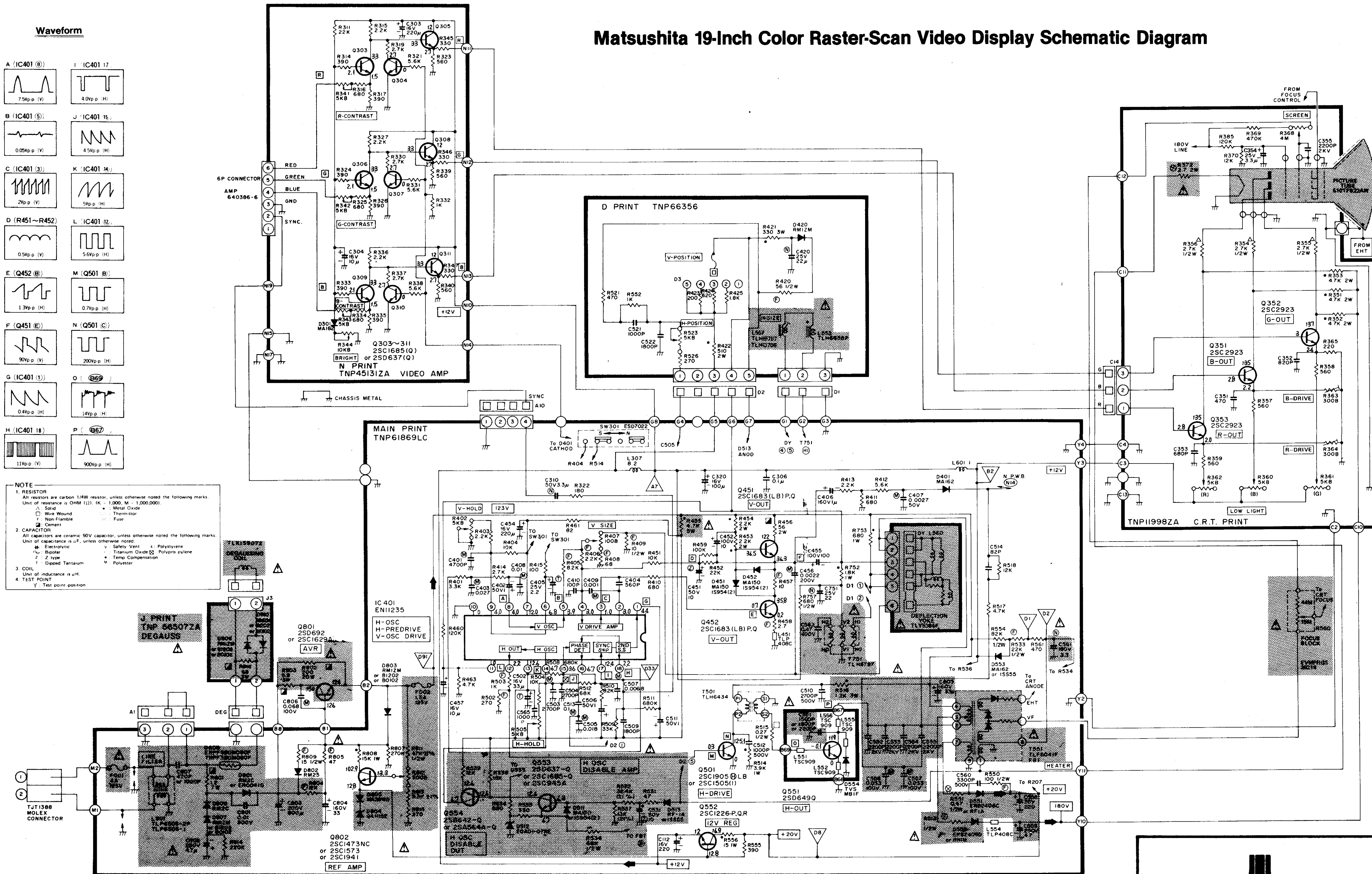
ATARI®

Electrohome Display Schematic Diagram

A Warner Communications Company

SP-218 Sheet 16A
8th printing

Matsushita 19-Inch Color Raster-Scan Video Display Schematic Diagram



WARNING

Components identified by shading have special characteristics important to safety and must be replaced only with identical parts.

ATARI®

Matsushita Display Schematic Diagram

SP-218 Sheet 16B

8th printing